Publication date: 02-Jun-2004
Reprinted from RatingsDirect

New Business Profile Scores Assigned for U.S. Utility and Power Companies; Financial Guidelines Revised

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Standard & Poor's Ratings Services has assigned new business profile scores to U.S. utility and power companies to better reflect the relative business risk among companies in the sector. Standard & Poor's also has revised its published risk-adjusted financial guidelines. The new business scores and financial guidelines do not represent a change to Standard & Poor's ratings criteria or methodology, and no ratings changes are anticipated from the new business profile scores or revised financial guidelines.

New Business Profile Scores and Revised Financial Guidelines

Standard & Poor's has always monitored changes in the industry and altered its business risk assessments accordingly. This is the first time since the 10-point business profile scale for U.S. investor-owned utilities was implemented that a comprehensive assessment of the benefits and the application of the methodology has been made. The principal purpose was to determine if the methodology continues to provide meaningful differentiation of business risk. The review indicated that while business profile scoring continues to provide analytical benefits, the complete range of the 10-point scale was not being utilized to the fullest extent.

Standard & Poor's has also revised the key financial guidelines that it uses as an integral part of evaluating the credit quality of U.S. utility and power companies. These guidelines were last updated in June 1999. The financial guidelines for three principal ratios (funds from operations (FFO) interest coverage, FFO to total debt, and total debt to total capital) have been broadened so as to be more flexible. Pretax interest coverage as a key credit ratio was eliminated.

Finally, Standard & Poor's has segmented the utility and power industry into sub-sectors based on the dominant corporate strategy that a company is pursuing. Standard & Poor's has published a new U.S. utility and power company ranking list that reflects these sub-sectors.

There are numerous benefits to the reassessment. Fuller utilization of the entire 10-point scale provides a superior relative ranking of qualitative business risk. A simultaneous revision of the financial guidelines supports the goal of not causing rating changes from the recalibration of the business profiles. Classification of companies by sub-sectors will ensure greater comparability and consistency in ratings. The use of industry segmentation will also allow more in-depth statistical analysis of ratings distributions and rating changes.

The reassessment does not represent a change to Standard & Poor's criteria or methodology for determining ratings for utility and power companies. Each business

profile score should be considered as the assignment of a new score; these scores do not represent improvement or deterioration in our assessment of an individual company's business risk relative to the previously assigned score. The financial guidelines continue to be risk-adjusted based on historical utility and industrial medians. Segmentation into industry sub-sectors does not imply that specific company characteristics will not weigh heavily into the assignment of a company's business profile score.

Results

Previously, 83% of U.S. utility and power business profile scores fell between '3' and '6', which clearly does not reflect the risk differentiation that exists in the utility and power industry today. Since the 10-point scale was introduced, the industry has transformed into a much less homogenous industry, where the divergence of business risk--particularly regarding management, strategy, and degree of competitive market exposure--has created a much wider spectrum of risk profiles. Yet over the same period, business profile scores actually converged more tightly around a median score of '4'. The new business profile scores, as of the date of this publication, are shown in Chart 1. The overall median business profile score is now '5'.

Chart 1

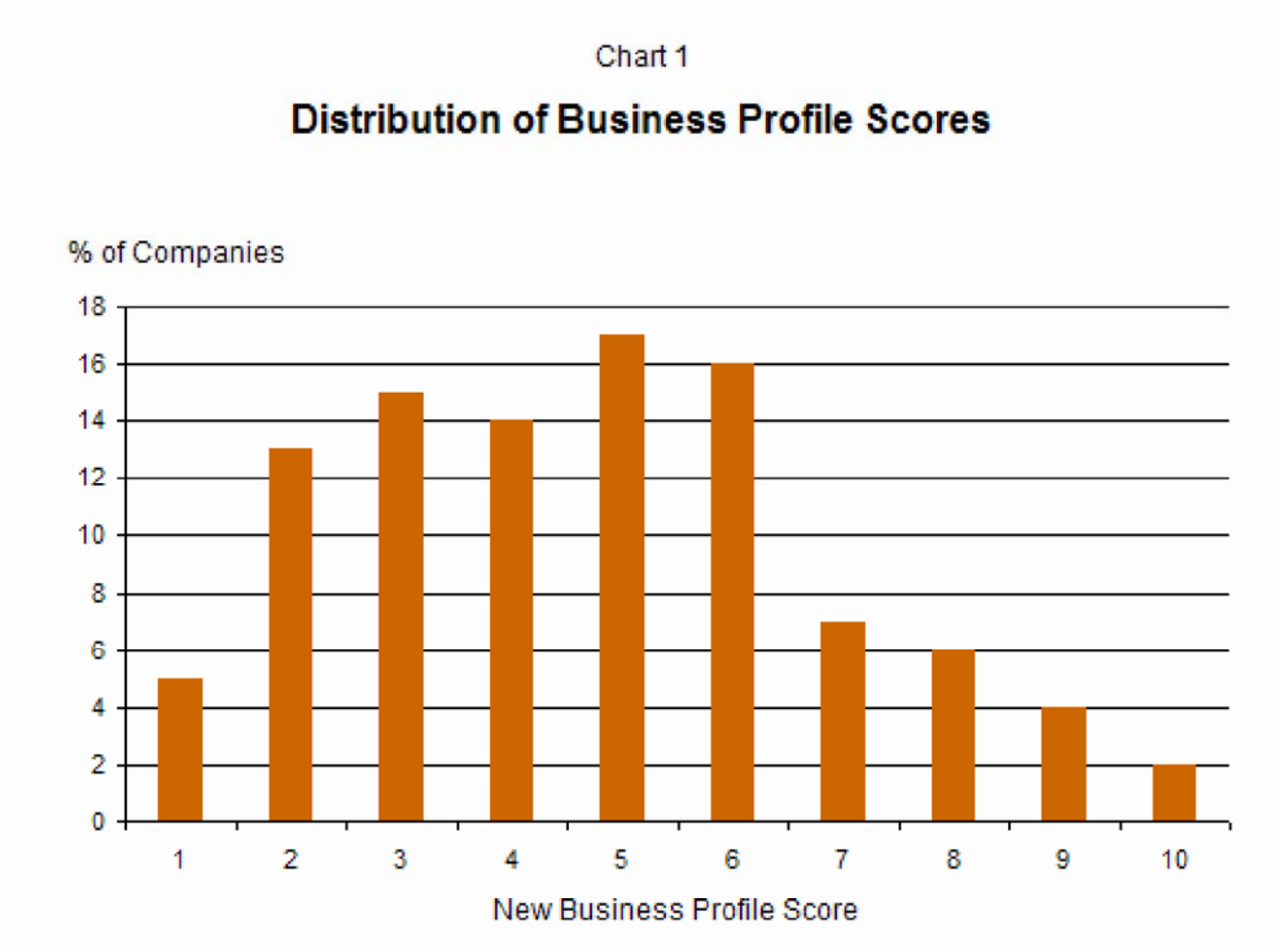


Table 1 contains the revised financial guidelines. It is important to emphasize that these metrics are only guidelines associated with expectations for various rating levels. Although credit ratio analysis is an important part of the ratings process, these three statistics are by no means the only critical financial measures that Standard & Poor's uses in its analytical process. We also analyze a wide array of financial ratios that do not have published guidelines for each rating category.

Table 1 Revised Financial Guidelines

Funds from operations/interest coverage (x)

Business Profile	AA		A		BBB		BB	
1	3	2.5	2.5	1.5	1.5	1		
2	4	3	3	2	2	1		
3	4.5	3.5	3.5	2.5	2.5	1.5	1.5	1
4	5	4.2	4.2	3.5	3.5	2.5	2.5	1.5
5	5.5	4.5	4.5	3.8	3.8	2.8	2.8	1.8
6	6	5.2	5.2	4.2	4.2	3	3	2
7	8	6.5	6.5	4.5	4.5	3.2	3.2	2.2
8	10	7.5	7.5	5.5	5.5	3.5	3.5	2.5
9			10	7	7	4	4	2.8
10			11	8	8	5	5	3

Funds from operation/total debt (%)

Business Profile	AA		A		BBB		BB	
1	20	15	15	10	10	5		
2	25	20	20	12	12	8		
3	30	25	25	15	15	10	10	5
4	35	28	28	20	20	12	12	8
5	40	30	30	22	22	15	15	10
6	45	35	35	28	28	18	18	12
7	55	45	45	30	30	20	20	15
8	70	55	55	40	40	25	25	15
9			65	45	45	30	30	20
10			70	55	55	40	40	25

Total debt/total capital (%)

Business Profile	AA		A		BBB		BB	
1	48	55	55	60	60	70		
2	45	52	52	58	58	68		
3	42	50	50	55	55	65	65	70
4	38	45	45	52	52	62	62	68
5	35	42	42	50	50	60	60	65

6	32	40	40	48	48	58	58	62
7	30	38	38	45	45	55	55	60
8	25	35	35	42	42	52	52	58
9			32	40	40	50	50	55
10			25	35	35	48	48	52

Again, ratings analysis is not driven solely by these financial ratios, nor has it ever been. In fact, the new financial guidelines that Standard & Poor's is incorporating for the specified rating categories reinforce the analytical framework whereby other factors can outweigh the achievement of otherwise acceptable financial ratios. These factors include:

- Effectiveness of liability and liquidity management;
- Analysis of internal funding sources;
- Return on invested capital;
- The record of execution of stated business strategies;
- Accuracy of projected performance versus actual results, as well as the trend;
- Assessment of management's financial policies and attitude toward credit; and
- Corporate governance practices.

Charts 2 through 6 show business profile scores broken out by industry sub-sector. The five industry sub-sectors are:

- Transmission and distribution--Water, gas, and electric;
- Transmission only--Electric, gas, and other;
- Integrated electric, gas, and combination utilities;
- Diversified energy and diversified nonenergy; and
- Energy merchant/power developer/trading and marketing companies.

Chart 2

Transmission and Distribution--Water, Gas, and Electric

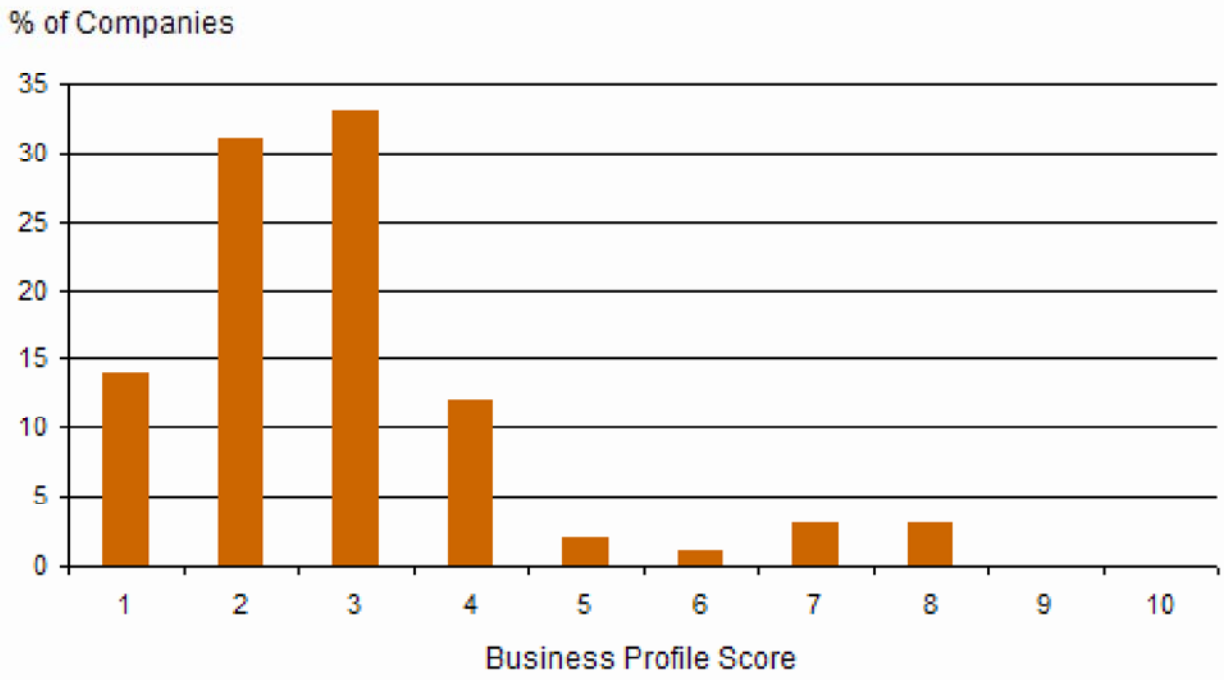


Chart 3

Transmission Only--Electric, Gas, and Other

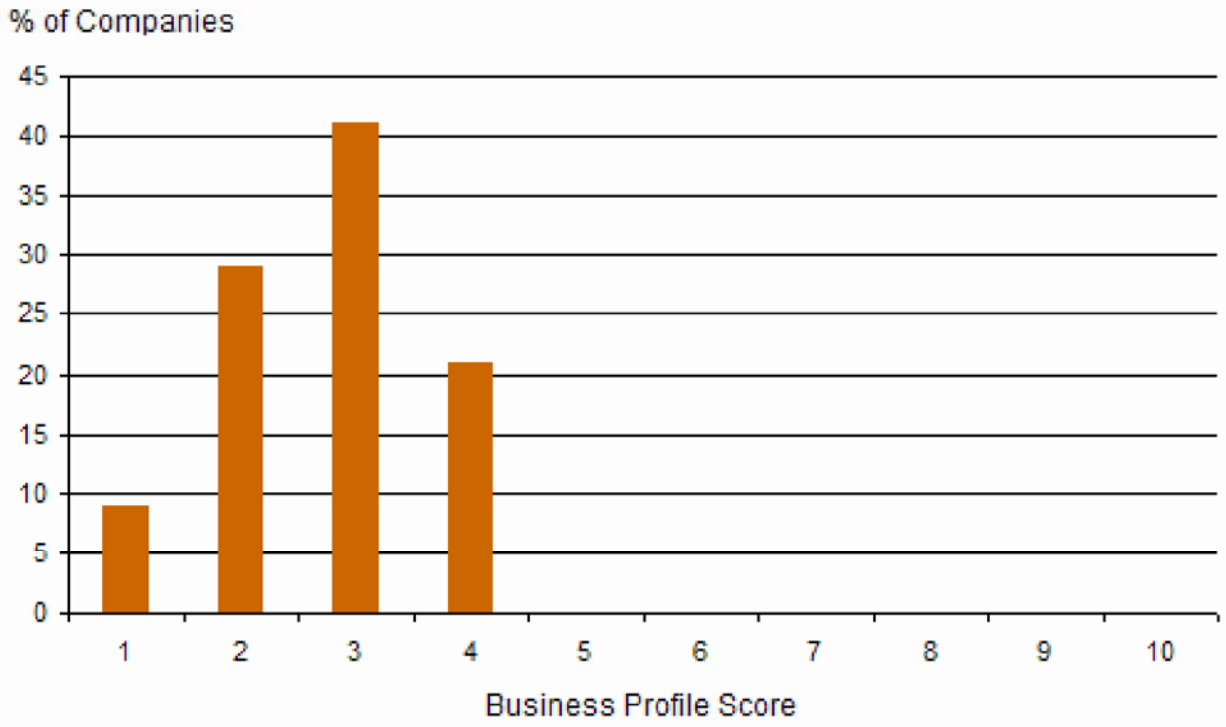


Chart 4

Integrated Electric, Gas, and Combination Utilities

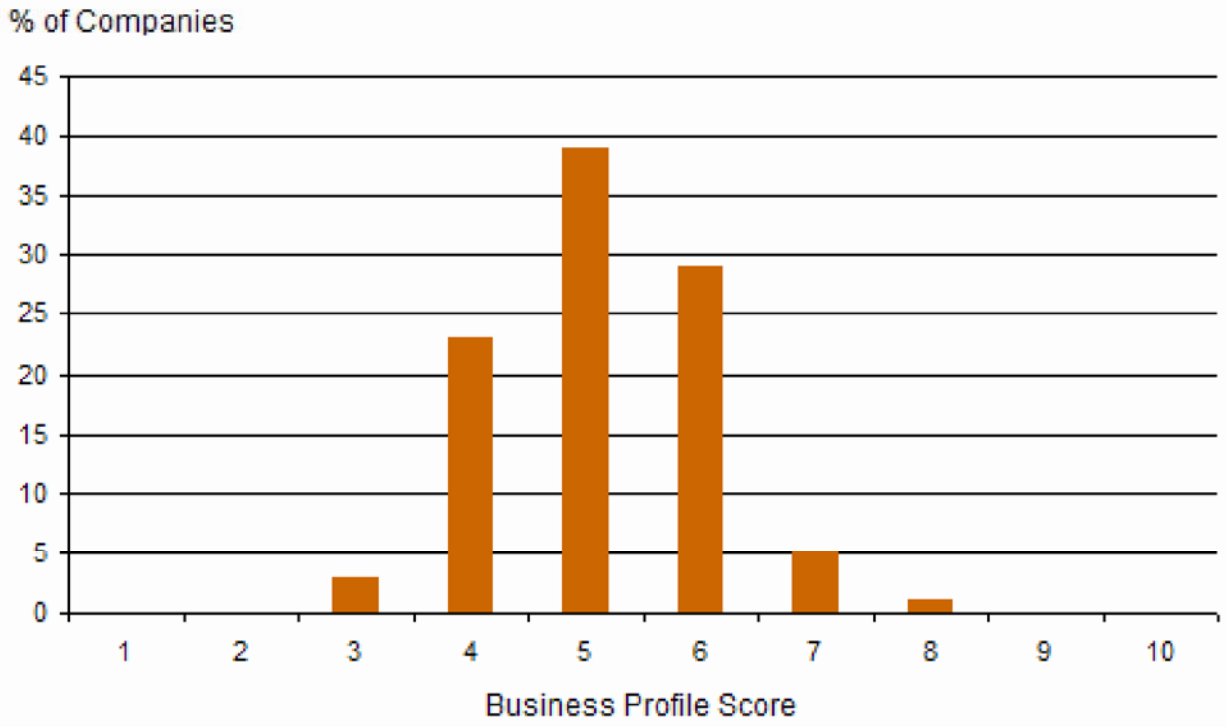


Chart 5

Diversified Energy and Diversified Non-Energy

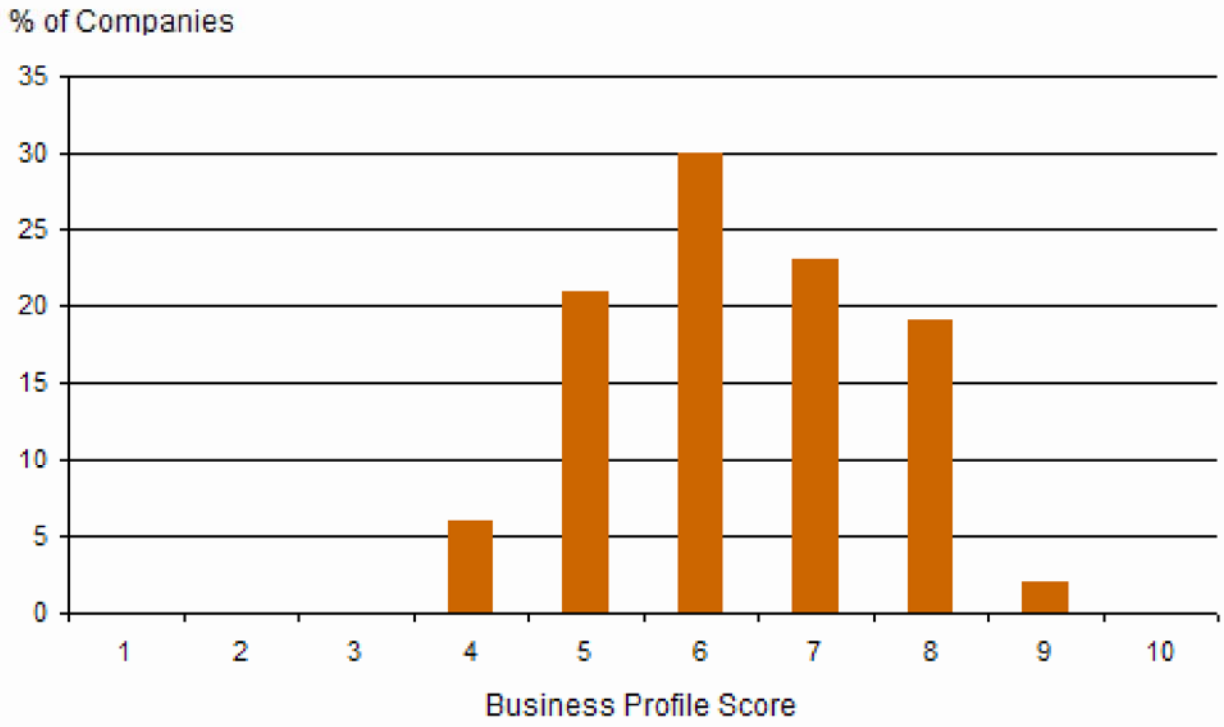
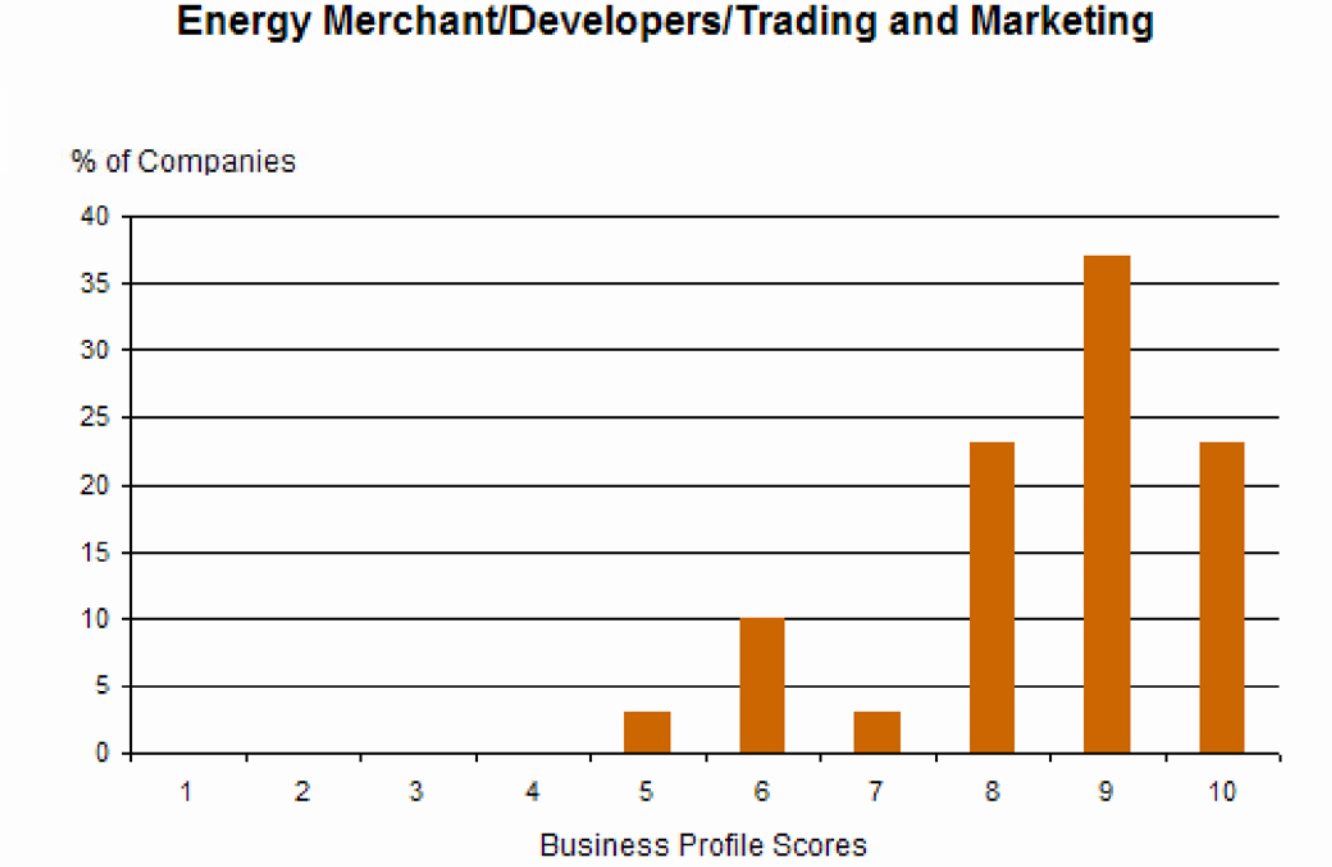


Chart 6



The average business profile scores for transmission and distribution companies and transmission-only companies are lower on the scale than the previous averages, while the average business profile scores for integrated utilities, diversified energy, and energy merchants and developers are higher.

The Appendix provides the company list of business profile scores segmented by industry sub-sector and ranked in order of credit rating, outlook, business profile score, and relative strength.

Business Profile Score Methodology

Standard & Poor's methodology of determining corporate utility business risk is anchored in the assessment of certain specific characteristics that define the sector. We assign business profile scores to each of the rated companies in the utility and power sector on a 10-point scale, where '1' represents the lowest risk and '10' the highest risk. Business profile scores are assigned to all rated utility and power companies, whether they are holding companies, subsidiaries or stand-alone corporations. For operating subsidiaries and stand-alone companies, the score is a bottom-up assessment. Scores for families of companies are a composite of the operating subsidiaries' scores. The actual credit rating of a company is analyzed, in part, by comparing the business profile score with the risk-adjusted financial guidelines.

For most companies, business profile scores are assessed using five categories; specifically, regulation, markets, operations, competitiveness, and management.

The emphasis placed on each category may be influenced by the dominant strategy of the company or other factors. For example, for a regulated transmission and distribution company, regulation may account for 30% to 40% of the business profile score because regulation can be the single-most important credit driver for this type of company. Conversely, competition, which may not exist for a transmission and distribution company, would provide a much lower proportion (e.g., 5% to 15%) of the business profile score.

For certain types of companies, such as power generators, power developers, oil and gas exploration and production companies, or nonenergy-related holdings, where these five components may not be appropriate, Standard & Poor's will use other, more appropriate methodologies. Some of these companies are assigned business profile scores that are useful only for relative ranking purposes.

As noted above, the business profile score for a parent or holding company is a composite of the business profile scores of its individual subsidiary companies. Again, Standard & Poor's does not apply rigid guidelines for determining the proportion or weighting that each subsidiary represents in the overall business profile score. Instead, it is determined based on a number of factors. Standard & Poor's will analyze each subsidiary's contribution to FFO, forecast capital expenditures, liquidity requirements, and other parameters, including the extent to which one subsidiary has higher growth. The weighting is determined case-by-case.

Appendix: U.S. Utility and Power Company Ranking List

U.S. Utility and Power Company Ranking List		
Company	**Corporate Credit Rating**	**Business Profile**
1. Regulated Transmission and Distribution - Electric, Gas, and Water		
Baton Rouge Water Works Co. (The)	AA/Stable/--	1
Nicor Gas Co.	AA/Stable/A-1+	2
Nicor Inc.	AA/Stable/A-1+	3
Washington Gas Light Co.	AA-/Stable/A-1+	2
WGL Holdings Inc.	AA-/Stable/A-1+	3
New Jersey Natural Gas Co.	A+/Stable/A-1	1
Aqua Pennsylvania	A+/Stable/--	2
KeySpan Energy Delivery Long Island	A+/Negative/--	1
KeySpan Energy Delivery New York	A+/Negative/--	1
Elizabethtown Water Co.	A+/Negative/--	2
California Water Service Co.	A+/Negative/--	3
Questar Gas Co.	A+/Negative/--	3
Southern California Gas Co.	A/Stable/A-1	1
Boston Edison Co.	A/Stable/A-1	1
Commonwealth Electric Co.	A/Stable/--	1
Cambridge Electric Light Co.	A/Stable/--	1
NSTAR	A/Stable/A-1	1

Massachusetts Electric Co.	A/Stable/A-1	1
Narragansett Electric Co.	A/Stable/A-1	1
Northwest Natural Gas Co.	A/Stable/A-1	1
Connecticut Water Service Inc.	A/Stable/ --	2
Connecticut Water Co. (The)	A/Stable/ --	2
Aquarion Co.	A/Stable/--	2
Aquarion Water Co. of Connecticut	A/Stable/--	2
NSTAR Gas Co.	A/Stable/--	2
Piedmont Natural Gas Co. Inc.	A/Stable/A-1	2
National Grid USA	A/Stable/A-1	2
Consolidated Edison Co. of New York Inc.	A/Stable/A-1	2
Orange and Rockland Utilities Inc.	A/Stable/A-1	2
Rockland Electric Co.	A/Stable/--	2
Consolidated Edison Inc.	A/Stable/A-1	2
Laclede Gas Co.	A/Stable/A-1	3
Laclede Group Inc.	A/Stable/--	3
Atlantic City Sewerage Co.	A/Stable/--	3
Niagara Mohawk Power Corp.	A/Stable/--	3
Central Hudson Gas & Electric Co.	A/Stable/--	3
American Water Capital Corp.	A/Negative/	2
Boston Gas Co.	A/Negative/--	2
Colonial Gas Co.	A/Negative/--	2
Middlesex Water Co.	A/Negative/--	3
York Water Co. (The)	A-/Stable/--	2
Alabama Gas Corp.	A-/Stable/--	2
Atlanta Gas Light Co.	A-/Stable/--	2
Public Service Co. of North Carolina Inc.	A-/Stable/A-2	2
Wisconsin Gas Co.	A-/Stable/A-2	2
North Shore Gas Co.	A-/Stable/A-2	2
Peoples Gas Light & Coke Co.	A-/Stable/A-2	2
ONEOK Inc.	A-/Stable/A-2	6
Indiana Gas Co. Inc.	A-/Negative/--	1
Southern California Water Co.	A-/Negative/--	3
American States Water Co.	A-/Negative/--	3
United Water New Jersey	A-/Negative/--	4
United Waterworks	A-/Negative/--	4
PPL Electric Utilities Corp.	A-/Negative/--	4
Commonwealth Edison Co.	A-/Negative/A-2	4

PECO Energy Co.	A-/Negative/A-2	4
Central Illinois Public Service Co.	A-/CW-Neg/--	3
Western Massachusetts Electric Co.	BBB+/Stable/--	1
Cascade Natural Gas Corp.	BBB+/Stable/--	2
South Jersey Gas Co.	BBB+/Stable/--	2
Baltimore Gas & Electric Co.	BBB+/Stable/A-2	3
Connecticut Natural Gas Corp.	BBB+/Negative/--	3
Southern Connecticut Gas Co.	BBB+/Negative/--	3
Central Maine Power Co.	BBB+/Negative/--	3
Atlantic City Electric Co.	BBB+/Negative/A-2	3
Potomac Electric Power Co.	BBB+/Negative/A-2	3
Delmarva Power & Light Co.	BBB+/Negative/A-2	3
Yankee Gas Services Co.	BBB+/Negative/--	3
Connecticut Light & Power Co.	BBB+/Negative/--	3
UGI Utilities Inc.	BBB+/Negative/--	4
Bay State Gas Co.	BBB/Stable/--	2
AEP Texas Central Co.	BBB/Stable/--	2
AEP Texas North Co.	BBB/Stable/--	2
Southwest Gas Corp.	BBB-/Stable/--	3
Columbus Southern Power Co.	BBB/Stable/--	3
Ohio Power Co.	BBB/Stable/--	3
Public Service Electric & Gas Co.	BBB/Stable/A-2	3
Oncor Electric Delivery Co.	BBB/Negative/--	2
Southern Union Co.	BBB/Negative/--	3
Centerpoint Energy Houston Electric LLC	BBB/Negative/--	3
CenterPoint Energy Resources Corp.	BBB/Negative/--	3
Duquesne Light Co.	BBB/Negative/	4
Duquesne Light Holdings Inc.	BBB/Negative/ --	5
TXU Gas Co.	BBB/CW-Dev/--	3
Jersey Central Power & Light Co.	BBB-/Stable/--	4
Metropolitan Edison Co.	BBB-/Stable/--	4
Pennsylvania Electric Co.	BBB-/Stable/--	4
Texas-New Mexico Power Co.	BB+/Stable/--	4
AmeriGas Partners L.P.	BB+/Stable/--	7
NUI Utilities Inc.	BB/CW-Dev/--	4
Suburban Propane Partners L.P.	BB-/Stable/--	8
Star Gas Partners L.P.	BB-/Stable/--	8
SEMCO Energy Inc.	BB-/Negative/--	5

Ferrellgas Partners L.P.	BB-/Negative/--	3
Potomac Edison Co.	B/Stable/--	3
West Penn Power Co.	B/Stable/--	3
Illinova Corp.	B/Negative/--	7
NorthWestern Corp.	D/NM/--	7
2. Transmission Only - Electric, Gas, and Other		
Questar Pipeline Co.	A+/Negative/--	3
Mid-West Independent Transmission System Operator Inc.	A/Stable/--	1
American Transmission Co.	A/Stable/A-1	1
New England Power Co.	A/Stable/A-1	1
Colonial Pipeline Co.	A/Stable/A-1	3
Dixie Pipeline Co.	--/--/A-1	3
Plantation Pipeline Co.	--/--/A-1	3
Explorer Pipeline Co.	A/Stable/A-1	4
Northern Natural Gas Co.	A-/Positive/--	2
Buckeye Partners L.P.	A-/Stable/--	4
Kern River Gas Transmission Co.	A-/Negative/--	3
Northern Border Pipeline Co.	A-/CW-Neg/--	2
Texas Gas Transmission LLC	BBB+/Stable/--	3
Iroquois Gas Transmission System L.P.	BBB+/Stable/--	3
Florida Gas Transmission Co.	BBB/Stable/--	2
International Transmission Co.	BBB/Stable	2
ITC Holding Corp.	BBB/Stable	2
Texas Eastern Transmission L.P.	BBB/Stable/--	3
PanEnergy Corp.	BBB/Stable/--	3
TE Products Pipeline Co. L.P.	BBB/Stable/--	4
TEPPCO Partners L.P.	BBB/Stable/--	4
Panhandle Eastern Pipeline LLC	BBB/Negative/--	3
Noark Pipeline Finance LLC	BBB/Negative/--	4
Southern Star Central Gas Pipeline Inc.	BB/Stable/--	3
Transwestern Pipeline Co.	BB/CW-Dev/--	4
Transcontinental Gas Pipe Line Corp.	B+/Negative/--	2
Northwest Pipeline Corp.	B+/Negative/--	2
Colorado Interstate Gas Co.	B-/Negative/--	2
Southern Natural Gas Co.	B-/Negative/--	2
ANR Pipeline Co.	B-/Negative/--	3
Tennessee Gas Pipeline Co.	B-/Negative/--	3
El Paso Tennessee Pipeline Co.	B-/Negative/--	3

El Paso Natural Gas Co.	B-/Negative/--	4
Gas Transmission-Northwest Corp.	CC/CW-Pos/--	2
3. Integrated Electric, Gas, and Combination Utilities		
Wisconsin Public Service Corp.	AA-/Stable/A-1+	4
Madison Gas & Electric Co.	AA/Negative/A-1+	4
Southern Co.	A/Stable/A-1	4
Georgia Power Co.	A/Stable/A-1	4
Alabama Power Co.	A/Stable/A-1	4
Mississippi Power Co.	A/Stable/A-1	4
Gulf Power Co.	A/Stable/--	4
Savannah Electric & Power Co.	A/Stable/--	4
San Diego Gas & Electric Co.	A/Stable/A-1	5
MidAmerican Energy Co.	A/Stable/A-1	5
Questar Corp.	--/--/A-1	6
Equitable Resources Inc.	A/Stable/A-1	6
Florida Power & Light Co.	A/Negative/A-1	4
South Carolina Electric & Gas Co.	A-/Stable/A-2	4
SCANA Corp.	A-/Stable/--	4
Wisconsin Electric Power Co.	A-/Stable/A-2	4
AGL Resources Inc.	A-/Stable/A-2	4
Virginia Electric & Power Co. (Dominion Virginia)	A-/Stable/A-2	5
Idaho Power Co.	A-/Stable/A-2	5
IDACORP Inc.	A-/Stable/A-2	5
Energen Corp.	A-/Stable/--	6
Vectren Utility Holdings Inc.	A-/Negative/A-2	3
Wisconsin Power & Light Co.	A-/Negative/A-2	4
Atmos Energy Corp.	A-/Negative/A-2	4
Southern Indiana Gas & Electric Co.	A-/Negative/--	5
Montana-Dakota Utilities Co.	A-/Negative/--	5
PacifiCorp	A-/Negative/A-2	5
Northern Border Partners L.P.	A-/CW-Neg/--	4
Central Illinois Light Co.	A-/CW-Neg/--	5
CILCORP	A-/CW-Neg/--	5
Union Electric Co.	A-/CW-Neg/A-2	5
Ameren Corp.	A-/CW-Neg/A-2	5
Cincinnati Gas & Electric Co.	BBB+/Stable/A2-	4
Oklahoma Gas & Electric Co.	BBB+/Stable/A-2	4
Northern States Power Wisconsin	BBB+/Stable /A-2	5

Kentucky Utilities Co.	BBB+/Stable/A-2	5
Louisville Gas & Electric Co.	BBB+/Stable/A-2	5
Allete Inc.	BBB+/Stable/A-2	5
Wisconsin Energy Corp.	BBB+/Stable/A-2	5
PSI Energy Inc.	BBB+/Stable/A-2	5
Union Light Heat & Power Co.	BBB+/Stable/--	5
Hawaiian Electric Co. Inc.	BBB+/Stable/A-2	6
Enogex Inc.	BBB+/Stable/--	6
National Fuel Gas Co.	BBB+/Stable/A-2	7
Energy East Corp.	BBB+/Negative/--A2	3
RGS Energy Group Inc.	BBB+/Negative/--	4
Rochester Gas & Electric Corp.	BBB+/Negative/--	4
Michigan Consolidated Gas Co.	BBB+/Negative/A-2	4
Interstate Power & Light Co.	BBB+/Negative/A-2	5
Public Service Co. of New Hampshire	BBB+/Negative/--	5
Kaneb Pipe Line Operating Partnership L.P.	BBB+/Negative/--	5
Consolidated Natural Gas Co.	BBB+/Negative/A-2	6
Detroit Edison Co.	BBB+/Negative/A-2	6
Questar Market Resources Inc.	BBB+/Negative/--	8
Portland General Electric Co.	BBB+/CW-Neg./A-2	5
Columbia Energy Group	BBB/Stable/--	3
NiSource Inc.	BBB/Stable/--	4
Xcel Energy Inc.	BBB/Stable/A-2	5
Public Service Co. of Colorado	BBB/Stable /A-2	5
Northern States Power Co.	BBB/Stable /A-2	5
Southwestern Public Service Co.	BBB/Stable /A-2	5
Appalachian Power Co.	BBB/Stable/--	5
Kentucky Power Co.	BBB/Stable/--	5
Public Service Co. of Oklahoma	BBB/Stable/--	5
Southwestern Electric Power Co.	BBB/Stable/--	5
Northern Indiana Public Service Co.	BBB/Stable/--	5
Entergy Arkansas Inc.	BBB/Stable/--	5
Entergy Louisiana Inc.	BBB/Stable/--	5
Progress Energy Florida	BBB/Stable/--	5
Progress Energy Carolinas Inc.	BBB/Stable/A-2	5
Kansas City Power & Light Co.	BBB/Stable/A-2	6
PNM Resources Inc.	BBB/Stable/--	6
Southern California Edison Co.	BBB/Stable/A-2	6

Empire District Electric Co.	BBB/Stable/A-2	6
Entergy Mississippi Inc.	BBB/Stable/--	6
Entergy New Orleans Inc.	BBB/Stable/--	6
Duke Energy Field Services LLC	BBB/Stable/A-2	6
Arizona Public Service Co.	BBB/Negative/A-2	5
TXU U.S. Holdings Co.	BBB/Negative/--	5
Pinnacle West Capital Corp.	BBB/Negative/A-2	6
Cleco Power LLC	BBB/Negative/A-3	6
Puget Sound Energy Inc.	BBB-/Positive/A-3	5
Puget Energy Inc.	BBB-/Positive/--	5
Green Mountain Power Corp.	BBB-/Stable/--	5
Public Service Co. of New Mexico	BBB-/Stable/A-2	6
Pacific Gas & Electric Co.	BBB-/Stable/ --	6
Cleveland Electric Illuminating Co.	BBB-/Stable/--	6
Ohio Edison Co.	BBB-/Stable/--	6
Toledo Edison Co.	BBB-/Stable/--	6
Pennsylvania Power Co.	BBB-/Stable/--	6
El Paso Electric Co.	BBB-/Stable/--	6
Central Vermont Public Service Corp.	BBB-/Stable/--	6
Entergy Gulf States Inc.	BBB-/Stable/--	6
System Energy Resources Inc.	BBB-/Stable/--	7
Tampa Electric Co.	BBB-/Negative/A-3	4
Black Hills Power Inc.	BBB-/Negative/--	6
Westar Energy Inc.	BB+/Positive/--	5
Kansas Gas & Electric Co.	BB+/Positive/--	6
Indianapolis Power & Light Co.	BB+/Stable/--	4
IPALCO Enterprises Inc.	BB+/Stable/--	4
Enterprise Products Operating L.P.	BB+/Stable/--	6
Enterprise Products Partners L.P.	BB+/Stable/--	6
GulfTerra Energy Partners L.P.	BB+/CW-Neg/--	6
Consumers Energy Co.	BB/Negative/--	6
Tucson Electric Power Co.	BB/CW-Neg/--	6
Dayton Power & Light Co.	BB-/CW-Neg/ -	7
Monongahela Power Co.	B/Stable/--	5
Nevada Power Co.	B+/Negative/--	7
Sierra Pacific Power Co.	B+/Negative/--	7
Sierra Pacific Resources	B+/Negative/--	7
4. Diversified Energy and Diversified Non-Energy		
WPS Resources Corp.	A/Stable/A-1	5

KeySpan Corp.	A/Negative/A-1	4
FPL Group Inc.	A/Negative/--	6
Peoples Energy Corp.	A-/Stable/A-2	5
Vectren Corp.	A-/Negative/--	4
PacifiCorp Holdings Inc.	A-/Negative/--	5
Exelon Corp.	A-/Negative/A-2	7
MDU Resources Group Inc.	A-/Negative/A-2	7
Centennial Energy Holdings Inc.	A-/Negative/A-2	8
Otter Tail Corp.	A-/Negative/--	8
Kinder Morgan Energy Partners L.P.	BBB+/Stable/A-2	4
Northeast Utilities	BBB+/Stable/--	5
OGE Energy Corp.	BBB+/Stable/A-2	6
LG&E Energy Corp.	BBB+/Stable/--	6
Cinergy Corp.	BBB+/Stable/A-2	6
Constellation Energy Group Inc.	BBB+/Stable/A-2	7
Sempra Energy	BBB+/Stable/A-2	7
Pepco Holdings Inc.	BBB+/Negative/A-2	5
Conectiv	BBB+/Negative/--	5
Alliant Energy Corp.	BBB+/Negative/A-2	6
DTE Energy Co.	BBB+/Negative/A-2	6
Dominion Resources Inc.	BBB+/Negative/A-2	7
Kinder Morgan Inc.	BBB/Stable/A-2	5
American Electric Power Co. Inc.	BBB/Stable/A-2	6
Entergy Corp.	BBB/Stable/--	6
Hawaiian Electric Industries Inc.	BBB/Stable/A-2	6
Progress Energy Inc.	BBB/Stable/A-2	6
PPL Corp.	BBB/Stable/--	7
Public Service Enterprise Group Inc.	BBB/Stable/A-2	7
Great Plains Energy Inc.	BBB/Stable/--	7
Duke Energy Corp.	BBB/Stable/A-2	7
Duke Capital Corp.	BBB/Stable/A-2	8
TXU Corp.	BBB/Negative/--	5
Centerpoint Energy Inc.	BBB/Negative/--	5
Cleco Corp.	BBB/Negative/A-3	6
Potomac Capital Investment Corp.	BBB/Negative/--	8
MidAmerican Energy Holdings Co.	BBB-/Positive/--	5
FirstEnergy Corp.	BBB-/Stable/--	6
TECO Energy Inc.	BBB-/Negative/A-3	5
Black Hills Corp.	BBB-/Negative/--	8

Avista Corp.	BB+/Stable/--	6
Edison International	BB+/Stable/--	6
TNP Enterprises	BB+/Stable/--	6
New York Water Service Corp.	BB/Stable	7
CMS Energy Corp.	BB/Negative/--	7
DPL Inc.	BB- /CW-Neg/--	8
Williams Companies Inc. (The)	B+/Negative/--	8
Allegheny Energy Inc.	B/Stable/--	7
Dynegy Inc.	B/Negative/--	8
Dynegy Holdings Inc.	B/Negative/--	9
El Paso CGP Corp.	B-/Negative/--	6
Aquila Inc.	B-/Negative/--	8
El Paso Corp.	B-/Negative/--	8
5. Energy Merchants/Power Developers/Trading and Marketing		
Entergy-Koch L.P.	A/Stable/--	9
KeySpan Generation LLC	A/Negative/--	5
FPL Group Capital	A/Negative/A-1	8
Exelon Generation Co.	A-/Negative/A-2	8
AmerenEnergy Generating Co.	A-/CW-Neg/--	8
Southern Power Co.	BBB+/Stable/--	6
LG&E Capital Corp.	BBB+/Stable/A-2	9
Alliant Energy Resources Inc.	BBB+/Negative/--	9
American Ref-Fuel Co. LLC	BBB/Stable/--	6
PSEG Power LLC	BBB/Stable/--	8
PPL Energy Supply LLC	BBB/Stable/--	8
TXU Energy Co. LLC	BBB/Negative/--	7
Duke Energy Trading and Marketing LLC	BBB-/Negative/--	10
Northeast Generation Company	BB+/Negative/--	9
Cogentrix Energy	BB-/Stable/--	6
PSEG Energy Holdings Inc.	BB-/Stable/--	9
AES Corp.	B+/Stable/--	9
NRG Energy Inc.	B+/Stable	9
Allegheny Energy Supply Co. LLC	B/Stable/--	8
Reliant Resources Inc.	B/Negative/--	8
Calpine Corp	B/Negative/--	9
Edison Mission Energy	B/Negative/--	9
Orion Power Holdings Inc	B/Negative/--	9
Reliant Energy Mid-Atlantic Power Holdings LLC	B/Negative/--	9

Mirant Americas Generation Inc.	D/--/--	10
Mirant Americas Energy Marketing L.P.	D/--/--	10
Mirant Corp.	D/--/--	10
NEGT Energy Trading Holdings Corp	D/--/--	10
PG&E National Energy Group	D/--/--	10
USGen New England Inc.	D/--/--	10

Published by Standard & Poor's, a Division of The McGraw-Hill Companies, Inc. Executive offices: 1221 Avenue of the Americas, New York, NY 10020. Editorial offices: 55 Water Street, New York, NY 10041. Subscriber services: (1) 212-438-7280.

STANDARD &POOR'S

RATINGSDIRECT®

November 30, 2007

U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix

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U.S. Utilities Ratings Analysis Now Portrayed In The S&P Corporate Ratings Matrix

The electric, gas, and water utility ratings ranking lists published today by Standard & Poor's U.S. Utilities & Infrastructure Ratings practice are categorized under the business risk/financial risk matrix used by the Corporate Ratings group. This is designed to present our rating conclusions in a clear and standardized manner across all corporate sectors. Incorporating utility ratings into a shared framework to communicate the fundamental credit analysis of a company furthers the goals of transparency and comparability in the ratings process. Table 1 shows the matrix.

Table 1

Business Risk/Financial Risk

	Financial Risk Profile				
Business Risk Profile	**Minimal**	**Modest**	**Intermediate**	**Aggressive**	**Highly leveraged**
Excellent	AAA	AA	A	BBB	BB
Strong	AA	A	A-	BBB-	BB-
Satisfactory	A	BBB+	BBB	BB+	B+
Weak	BBB	BBB-	BB+	BB-	B
Vulnerable	BB	B+	B+	B	B-

The utilities rating methodology remains unchanged, and the use of the corporate risk matrix has not resulted in any changes to ratings or outlooks. The same five factors that we analyzed to produce a business risk score in the familiar 10-point scale are used in determining whether a utility possesses an "Excellent," "Strong," "Satisfactory," "Weak," or "Vulnerable" business risk profile:

- Regulation,
- Markets,
- Operations,
- Competitiveness, and
- Management.

Regulated utilities and holding companies that are utility-focused virtually always fall in the upper range ("Excellent" or "Strong") of business risk profiles. The defining characteristics of most utilities--a legally defined service territory generally free of significant competition, the provision of an essential or near-essential service, and the presence of regulators that have an abiding interest in supporting a healthy utility financial profile--underpin the business risk profiles of the electric, gas, and water utilities.

As the matrix concisely illustrates, the business risk profile loosely determines the level of financial risk appropriate for any given rating. Financial risk is analyzed both qualitatively and quantitatively, mainly with financial ratios and other metrics that are calculated after various analytical adjustments are performed on financial statements prepared under GAAP. Financial risk is assessed for utilities using, in part, the indicative ratio ranges in table 2.

Table 2

Financial Risk Indicative Ratios - U.S. Utilities

(Fully adjusted, historically demonstrated, and expected to consistently continue)

	Cash flow		Debt leverage
	(FFO/debt) (%)	(FFO/interest) (x)	(Total debt/capital) (%)
Modest	40 - 60	4.0 - 6.0	25 - 40
Intermediate	25 - 45	3.0 - 4.5	35 - 50
Aggressive	10 - 30	2.0 - 3.5	45 - 60
Highly leveraged	Below 15	2.5 or less	Over 50

The indicative ranges for utilities differ somewhat from the guidelines used for their unregulated counterparts because of several factors that distinguish the financial policy and profile of regulated entities. Utilities tend to finance with long-maturity capital and fixed rates. Financial performance is typically more uniform over time, avoiding the volatility of unregulated industrial entities. Also, utilities fare comparatively well in many of the less-quantitative aspects of financial risk. Financial flexibility is generally quite robust, given good access to capital, ample short-term liquidity, and the like. Utilities that exhibit such favorable credit characteristics will often see ratings based on the more accommodative end of the indicative ratio ranges, especially when the company's business risk profile is solidly within its category. Conversely, a utility that follows an atypical financial policy or manages its balance sheet less conservatively, or falls along the lower end of its business risk designation, would have to demonstrate an ability to achieve financial metrics along the more stringent end of the ratio ranges to reach a given rating.

Note that even after we assign a company a business risk and financial risk, the committee does not arrive by rote at a rating based on the matrix. The matrix is a guide--it is not intended to convey precision in the ratings process or reduce the decision to plotting intersections on a graph. Many small positives and negatives that affect credit quality can lead a committee to a different conclusion than what is indicated in the matrix. Most outcomes will fall within one notch on either side of the indicated rating. Larger exceptions for utilities would typically involve the influence of related unregulated entities or extraordinary disruptions in the regulatory environment.

We will use the matrix, the ranking list, and individual company reports to communicate the relative position of a company within its business risk peer group and the other factors that produce the ratings.

STANDARD &POOR'S

RATINGSDIRECT®

March 2, 2009

Issuer Ranking:

U.S. Regulated Electric Utilities, Strongest To Weakest

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Issuer Ranking:

U.S. Regulated Electric Utilities, Strongest To Weakest

The regulated U.S. electric utility industry finished 2008 in a guarded state, having weathered the year's financial turmoil while bracing for more financial adversity in 2009. Despite recent widening for all investment-grade corporate debt, spreads on utility debt are tighter than the average for all corporate issues as investors are currently employing the old adage of "flight to quality". It remains to be seen if the regulated electric industry will perform as well for the duration of this economic downturn. The average industry rating is firmly ensconced in the 'BBB' category, with 80% garnering a stable outlook reflecting balance-sheet strength, prudent financial policy, and effective liability management.

The following list contains Standard & Poor's Ratings Services' ratings, outlooks, and business and financial profiles for companies with a primary regulated electric focus. This list reflects the current ratings and outlooks as of March 2, 2009. The rankings in each rating/outlook grouping (e.g., BBB+/Stable/--) are based on relative business risk.

A Standard & Poor's rating outlook assesses the potential direction of an issuer's long-term debt rating over the intermediate to longer term. In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future CreditWatch action. "Positive" indicates that a rating may be raised; "negative" means a rating may be lowered; "stable" indicates that ratings are not likely to change; and "developing" means ratings may be raised or lowered.

Utility business profiles can be categorized as "Excellent," "Strong," "Satisfactory," "Weak," or "Vulnerable" under the credit ratings methodology applied to all rated corporate entities at Standard & Poor's. To determine a utility's business profile, Standard & Poor's analyzes the following qualitative business or operating characteristics: markets and service area economy; competitive position; fuel and power supply; operations; asset concentration; regulation; and management. Issuer credit ratings, shown as long-term rating/outlook or CreditWatch/short-term rating, are local and foreign currency unless otherwise noted. A dash (--) indicates not rated.

For the related industry report card, please see "Industry Report Card: U.S. Electric Utility Credit Quality Remains Strong Amid Continuing Economic Downturn," published Dec. 19, 2008.

U.S. Regulated Electric Utilities

Company	Corporate credit rating*	Business profile	Financial profile
Madison Gas & Electric Co.	AA-/Stable/A-1+	Excellent	Intermediate
-			
American Transmission Co.	A+/Stable/A-1	Excellent	Intermediate
Midwest Independent Transmission System Operator Inc.	A+/Stable/--	Excellent	Intermediate
NSTAR Electric Co.	A+/Stable/A-1	Excellent	Intermediate
NSTAR Gas Co.	A+/Stable/--	Excellent	Intermediate
NSTAR	A+/Stable/A-1	Excellent	Intermediate
-			
Florida Power & Light Co.	A/Stable/A-1	Excellent	Intermediate
KeySpan Energy Delivery Long Island	A/Stable/A-1	Excellent	Intermediate

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Issuer Ranking: U.S. Regulated Electric Utilities, Strongest To Weakest

U.S. Regulated Electric Utilities (cont.)			
KeySpan Energy Delivery New York	A/Stable/A-1	Excellent	Intermediate
Northern Natural Gas Co.	A/Stable/--	Excellent	Intermediate
Alabama Power Co.	A/Stable/A-1	Excellent	Intermediate
Georgia Power Co.	A/Stable/A-1	Excellent	Intermediate
Mississippi Power Co.	A/Stable/A-1	Excellent	Intermediate
Gulf Power Co.	A/Stable/--	Excellent	Intermediate
San Diego Gas & Electric Co.	A/Stable/--	Excellent	Intermediate
FPL Group Inc.	A/Stable/--	Excellent	Intermediate
Southern Co.	A/Stable/A-1	Excellent	Intermediate
Central Hudson Gas & Electric Corp.	A/Stable/--	Excellent	Intermediate
-			
Wisconsin Public Service Corp.	A/Negative/A-2	Excellent	Intermediate
-			
Duke Energy Indiana Inc.	A-/Positive/A-2	Excellent	Intermediate
Duke Energy Carolinas LLC	A-/Positive/A-2	Excellent	Intermediate
Duke Energy Ohio Inc.	A-/Positive/A-2	Excellent	Intermediate
Duke Energy Kentucky Inc.	A-/Positive/--	Excellent	Intermediate
Wisconsin Gas LLC	A-/Positive/A-2	Excellent	Intermediate
Wisconsin Electric Power Co.	A-/Positive/A-2	Excellent	Intermediate
Cinergy Corp.	A-/Positive/A-2	Excellent	Intermediate
Duke Energy Corp.	A-/Positive/A-2	Excellent	Intermediate
-			
California Independent System Operator Corp.	A-/Stable/--	Excellent	Intermediate
Massachusetts Electric Co.	A-/Stable/A-2	Excellent	Intermediate
Narragansett Electric Co.	A-/Stable/A-2	Excellent	Intermediate
New England Power Co.	A-/Stable/A-2	Excellent	Intermediate
Consolidated Edison Co. of New York Inc.	A-/Stable/A-2	Excellent	Intermediate
Orange and Rockland Utilities Inc.	A-/Stable/A-2	Excellent	Intermediate
Rockland Electric Co.	A-/Stable/--	Excellent	Intermediate
Consolidated Edison Inc.	A-/Stable/A-2	Excellent	Intermediate
Virginia Electric & Power Co.	A-/Stable/A-2	Excellent	Aggressive
Northern States Power Wisconsin	A-/Stable/--	Excellent	Intermediate
Wisconsin Power & Light Co.	A-/Stable/A-2	Excellent	Intermediate
Southern Indiana Gas & Electric Co.	A-/Stable/--	Excellent	Intermediate
Niagara Mohawk Power Corp.	A-/Stable/A-2	Excellent	Aggressive
National Grid USA	A-/Stable/A-2	Excellent	Intermediate
Dominion Resources Inc.	A-/Stable/A-2	Excellent	Aggressive
-			
Public Service Co. of North Carolina Inc.	A-/Negative/A-2	Excellent	Aggressive
South Carolina Electric & Gas Co.	A-/Negative/A-2	Excellent	Aggressive
Peoples Gas Light & Coke Co. (The)	A-/Negative/A-2	Excellent	Intermediate
North Shore Gas Co.	A-/Negative/--	Excellent	Intermediate

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Issuer Ranking: U.S. Regulated Electric Utilities, Strongest To Weakest

U.S. Regulated Electric Utilities (cont.)			
Peoples Energy Corp.	A-/Negative/A-2	Excellent	Intermediate
SCANA Corp.	A-/Negative/--	Excellent	Aggressive
PPL Electric Utilities Corp.	A-/Negative/A-2	Excellent	Aggressive
Integrys Energy Group Inc.	A-/Negative/A-2	Strong	Intermediate
-			
PacifiCorp	A-/Watch Neg/A-1	Excellent	Aggressive
MidAmerican Energy Co.	A-/Watch Neg/A-1	Excellent	Aggressive
MidAmerican Energy Holdings Co.	A-/Watch Neg/--	Excellent	Aggressive
-			
Wisconsin Energy Corp.	BBB+/Positive/A-2	Excellent	Aggressive
-			
Oncor Electric Delivery Co. LLC	BBB+/Stable/--	Excellent	Intermediate
Southern California Edison Co.	BBB+/Stable/A-2	Excellent	Intermediate
Pacific Gas & Electric Co.	BBB+/Stable/A-2	Excellent	Intermediate
Florida Power Corp. d/b/a Progress Energy Florida Inc.	BBB+/Stable/A-2	Excellent	Aggressive
Carolina Power & Light Co. d/b/a Progress Energy Carolinas Inc.	BBB+/Stable/A-2	Excellent	Aggressive
Kentucky Utilities Co.	BBB+/Stable/A-2	Excellent	Intermediate
Louisville Gas & Electric Co.	BBB+/Stable/--	Excellent	Intermediate
Oklahoma Gas & Electric Co.	BBB+/Stable/A-2	Excellent	Intermediate
Public Service Co. of Colorado	BBB+/Stable/A-2	Excellent	Aggressive
Northern States Power Co.	BBB+/Stable/A-2	Excellent	Aggressive
Southwestern Public Service Co.	BBB+/Stable/A-2	Excellent	Aggressive
Interstate Power & Light Co.	BBB+/Stable/A-2	Excellent	Aggressive
Xcel Energy Inc.	BBB+/Stable/A-2	Excellent	Aggressive
Progress Energy Inc.	BBB+/Stable/A-2	Excellent	Aggressive
Alliant Energy Corp.	BBB+/Stable/A-2	Excellent	Aggressive
E.ON U.S. LLC	BBB+/Stable/--	Excellent	Intermediate
OGE Energy Corp.	BBB+/Stable/A-2	Strong	Aggressive
Montana-Dakota Utilities Co.	BBB+/Stable/--	Strong	Intermediate
Enogex Inc.	BBB+/Stable/--	Satisfactory	Intermediate
-			
ALLETE Inc.	BBB+/Negative/A-2	Strong	Intermediate
Portland General Electric Co.	BBB+/Negative/A-2	Strong	Intermediate
-			
The Berkshire Gas Co.	BBB+/Watch Neg/--	Excellent	Aggressive
Connecticut Natural Gas Corp.	BBB+/Watch Neg/--	Excellent	Aggressive
Southern Connecticut Gas Co.	BBB+/Watch Neg/--	Excellent	Aggressive
New York State Electric & Gas Corp.	BBB+/Watch Neg/A-2	Excellent	Aggressive
Central Maine Power Co.	BBB+/Watch Neg/--	Excellent	Aggressive
Rochester Gas & Electric Corp.	BBB+/Watch Neg/--	Excellent	Aggressive
Energy East Corp.	BBB+/Watch Neg/A-2	Excellent	Aggressive

U.S. Regulated Electric Utilities (cont.)			
-			
Dayton Power & Light Co.	BBB/Positive/--	Excellent	Aggressive
DPL Inc.	BBB/Positive/--	Excellent	Aggressive
-			
International Transmission Co.	BBB/Stable/--	Excellent	Aggressive
ITC Holdings Corp.	BBB/Stable/--	Excellent	Aggressive
ITC Midwest LLC	BBB/Stable/--	Excellent	Aggressive
Michigan Electric Transmission Co.	BBB/Stable/--	Excellent	Aggressive
Yankee Gas Services Co.	BBB/Stable/--	Excellent	Aggressive
Michigan Consolidated Gas Co.	BBB/Stable/A-2	Excellent	Aggressive
Public Service Electric & Gas Co.	BBB/Stable/A-2	Excellent	Aggressive
AEP Texas Central Co	BBB/Stable/--	Excellent	Aggressive
AEP Texas North Co	BBB/Stable/--	Excellent	Aggressive
Connecticut Light & Power Co.	BBB/Stable/--	Excellent	Aggressive
Public Service Co. of New Hampshire	BBB/Stable/--	Excellent	Aggressive
Jersey Central Power & Light Co.	BBB/Stable/--	Excellent	Aggressive
Columbus Southern Power Co.	BBB/Stable/--	Excellent	Aggressive
Ohio Power Co.	BBB/Stable/--	Excellent	Aggressive
Appalachian Power Co.	BBB/Stable/--	Excellent	Aggressive
CenterPoint Energy Houston Electric LLC	BBB/Stable/--	Excellent	Aggressive
CenterPoint Energy Inc.	BBB/Stable/A-2	Excellent	Aggressive
CenterPoint Energy Resources Corp.	BBB/Stable/--	Excellent	Aggressive
Western Massachusetts Electric Co.	BBB/Stable/--	Excellent	Aggressive
Atlantic City Electric Co.	BBB/Stable/A-2	Excellent	Aggressive
Potomac Electric Power Co.	BBB/Stable/A-2	Excellent	Aggressive
Kansas City Power & Light Co.	BBB/Stable/A-2	Excellent	Aggressive
Delmarva Power & Light Co.	BBB/Stable/A-2	Excellent	Aggressive
Green Mountain Power Corp.	BBB/Stable/--	Excellent	Aggressive
Kentucky Power Co.	BBB/Stable/--	Excellent	Aggressive
Public Service Co. of Oklahoma	BBB/Stable/--	Excellent	Aggressive
Southwestern Electric Power Co.	BBB/Stable/--	Excellent	Aggressive
Metropolitan Edison Co.	BBB/Stable/--	Excellent	Aggressive
Pennsylvania Electric Co.	BBB/Stable/--	Excellent	Aggressive
Cleveland Electric Illuminating Co.	BBB/Stable/--	Excellent	Aggressive
Ohio Edison Co.	BBB/Stable/A-2	Excellent	Aggressive
Pennsylvania Power Co.	BBB/Stable/--	Excellent	Aggressive
Toledo Edison Co.	BBB/Stable/--	Excellent	Aggressive
Detroit Edison Co.	BBB/Stable/A-2	Excellent	Aggressive
American Electric Power Co. Inc.	BBB/Stable/A-2	Excellent	Aggressive
Northeast Utilities	BBB/Stable/--	Excellent	Aggressive
Great Plains Energy Inc.	BBB/Stable/--	Excellent	Aggressive
FirstEnergy Corp.	BBB/Stable/--	Excellent	Aggressive

U.S. Regulated Electric Utilities (cont.)			
NorthWestern Corp.	BBB/Stable/--	Excellent	Aggressive
DTE Energy Co.	BBB/Stable/A-2	Excellent	Aggressive
Indiana Michigan Power Co.	BBB/Stable/--	Strong	Aggressive
Cleco Power LLC	BBB/Stable/--	Strong	Aggressive
Cleco Corp.	BBB/Stable/--	Strong	Aggressive
Hawaiian Electric Co. Inc.	BBB/Stable/A-2	Strong	Aggressive
Idaho Power Co.	BBB/Stable/A-2	Strong	Aggressive
IDACORP Inc.	BBB/Stable/A-2	Strong	Aggressive
El Paso Electric Co.	BBB/Stable/--	Strong	Aggressive
PEPCO Holdings Inc.	BBB/Stable/A-2	Strong	Aggressive
Hawaiian Electric Industries Inc.	BBB/Stable/A-2	Strong	Aggressive
-			
Entergy Arkansas Inc.	BBB/Negative/--	Strong	Aggressive
Entergy Louisiana LLC	BBB/Negative/--	Strong	Aggressive
Entergy Mississippi Inc.	BBB/Negative/--	Strong	Aggressive
Entergy Gulf States Louisiana LLC	BBB/Negative/--	Strong	Aggressive
Entergy Texas Inc.	BBB/Negative/--	Strong	Aggressive
Entergy Corp.	BBB/Negative/--	Strong	Aggressive
System Energy Resources Inc.	BBB/Negative/--	Strong	Aggressive
-			
PECO Energy Co.	BBB/Watch Neg/A-2	Excellent	Aggressive
Baltimore Gas & Electric Co.	BBB/Watch Neg/A-2	Strong	Intermediate
-			
Tampa Electric Co.	BBB-/Positive/A-3	Excellent	Aggressive
TECO Energy Inc.	BBB-/Positive/--	Excellent	Aggressive
-			
Potomac Edison Co.	BBB-/Stable/--	Excellent	Aggressive
West Penn Power Co.	BBB-/Stable/--	Excellent	Aggressive
Monongahela Power Co.	BBB-/Stable/--	Excellent	Aggressive
Westar Energy Inc.	BBB-/Stable/--	Excellent	Aggressive
Kansas Gas & Electric Co.	BBB-/Stable/--	Excellent	Aggressive
Consumers Energy Co.	BBB-/Stable/--	Excellent	Aggressive
CMS Energy Corp.	BBB-/Stable/A-3	Excellent	Aggressive
Union Electric Co. d/b/a AmerenUE	BBB-/Stable/A-3	Excellent	Aggressive
Empire District Electric Co.	BBB-/Stable/A-3	Strong	Aggressive
Edison International	BBB-/Stable/--	Strong	Aggressive
Black Hills Power Inc.	BBB-/Stable/--	Strong	Intermediate
Arizona Public Service Co.	BBB-/Stable/A-3	Strong	Aggressive
Pinnacle West Capital Corp.	BBB-/Stable/A-3	Strong	Aggressive
Avista Corp.	BBB-/Stable/A-3	Strong	Aggressive
Allegheny Energy Inc.	BBB-/Stable/A-3	Strong	Aggressive
Central Illinois Public Service Co.	BBB-/Stable/--	Strong	Aggressive

U.S. Regulated Electric Utilities (cont.)			
Illinois Power Co.	BBB-/Stable/--	Strong	Aggressive
Ohio Valley Electric Corp.	BBB-/Stable/--	Strong	Aggressive
Central Illinois Light Co.	BBB-/Stable/--	Satisfactory	Aggressive
CILCORP Inc.	BBB-/Stable/--	Satisfactory	Aggressive
Ameren Corp.	BBB-/Stable/A-3	Satisfactory	Aggressive
Black Hills Corp.	BBB-/Stable/--	Satisfactory	Intermediate
Otter Tail Corp.	BBB-/Stable/--	Satisfactory	Aggressive
-			
Duquesne Light Co.	BBB-/Negative/--	Excellent	Highly leveraged
Duquesne Light Holdings Inc.	BBB-/Negative/--	Excellent	Highly leveraged
Northern Indiana Public Service Co.	BBB-/Negative/--	Excellent	Aggressive
Entergy New Orleans Inc.	BBB-/Negative/--	Satisfactory	Aggressive
-			
Commonwealth Edison Co.	BBB-/Watch Neg/A-3	Strong	Aggressive
Puget Sound Energy Inc.	BBB-/Watch Neg/A-3	Excellent	Aggressive
Puget Energy Inc.	BBB-/Watch Neg/--	Excellent	Aggressive
-			
Central Vermont Public Service Corp.	BB+/Stable/--	Excellent	Highly leveraged
Indianapolis Power & Light Co.	BB+/Stable/--	Excellent	Highly leveraged
IPALCO Enterprises Inc.	BB+/Stable/--	Excellent	Highly leveraged
Tucson Electric Power Co.	BB+/Stable/B-2	Strong	Highly leveraged
-			
Nevada Power Co.	BB/Stable/--	Excellent	Highly leveraged
Sierra Pacific Power Co.	BB/Stable/--	Excellent	Highly leveraged
NV Energy Inc.	BB/Stable/B-2	Excellent	Highly leveraged
-			
Texas-New Mexico Power Co.	BB-/Negative/--	Satisfactory	Highly leveraged
Public Service Co. of New Mexico	BB-/Negative/B-2	Satisfactory	Highly leveraged
PNM Resources Inc.	BB-/Negative/B-2	Satisfactory	Highly leveraged

*As of March 2, 2009.

March 2005

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Rating Methodology: Global Regulated Electric Utilities

Summary

This rating methodology covers electric utility companies worldwide whose credit profile is significantly affected by the presence of regulation. In order for a company to be included within this classification, at least 40% of its business should derive from regulated electric activities. The methodology thus excludes all other electric and power companies operating in the unregulated market, such as generators or power retailers, and other regulated industries such as water and gas utilities.

Based upon this definition, Moody's rates over 100 companies that either are electric utilities or are the parent holding companies for subsidiaries that operate predominantly in the electric utility business. In addition, Moody's rates a large number of utility operating subsidiaries of the ultimate parent companies. Figure 1 offers a breakdown of the ultimate parent companies by geographic region and rating category as of 1 February 2005:

Figure 1 – Electric Utility Companies Covered By This Methodology - by Geographic Region and Rating Category

	Aaa	Aa	A	Baa	Ba	B	TOTAL
Asia/Pacific		2	8	6	1	1	18
Europe	1	7	16	9	1		34
Japan		3	6				9
Americas			10	30	10	5	55
Totals	**1**	**12**	**40**	**45**	**12**	**6**	**116**

Moody's concludes that – despite the considerable number of common characteristics shared by electric utilities on a worldwide basis – country-by-country regulatory differences and cultural and economic considerations make this a local industry seen globally rather than a truly global industry.

In general, regulated electric utilities offer lenders some of the lowest business risks seen amongst corporate entities. However, many of the companies in question may also be active in unregulated businesses, such as speculative trading with exposure to unhedged commodity prices, which can be highly risky and may lead to serious financial difficulties despite the presence of a regulator.

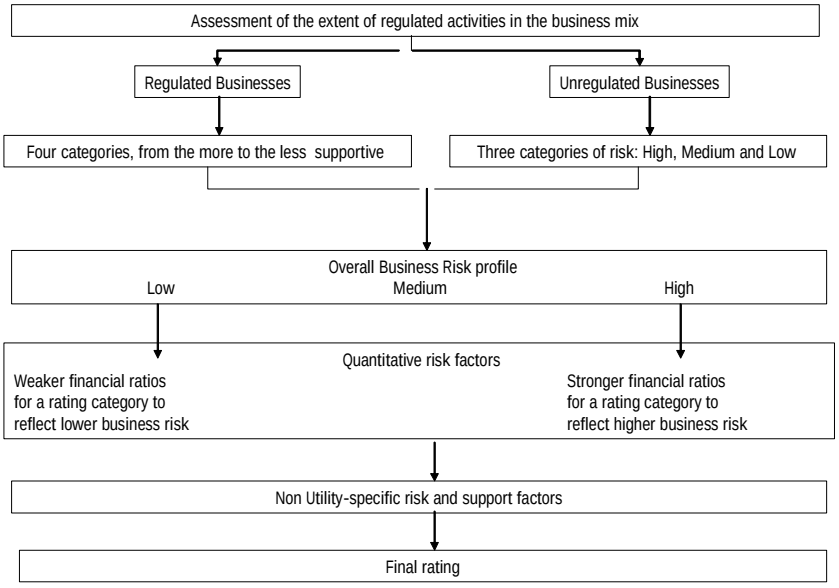
In addition, there is little consistency in the approach and application of regulatory frameworks around the world. Some are highly supportive of the "system" and those that operate within them, often offering implied sovereign support to ensure reliability of supply. Others are designed to protect the end-consumers from abuse of a monopoly supplier – a priority that may work to the detriment of companies operating in the system if they cannot meet regulators' expectations, or if the regulator fails to achieve the appropriate balance in the regulatory framework.

Under this rating methodology, Moody's:

1. Assesses the extent of a "regulated" company's exposure to its unregulated businesses. The strongest credit risk position is enjoyed by a company whose business is wholly regulated. Where non-utility activities are substantial, the main credit driver will be the assessment of these businesses.
2. Assesses the credit support that is gained from operating within a particular regulatory framework.
3. Considers the exact level of risk posed by the unregulated businesses to the overall credit.
4. Looks at six specific financial ratios which are considered the most useful when assessing an electric utility and the adjustments made to calculate these.
5. Considers more generic risk factors that are not specific to utility companies, e.g. the adequacy of liquidity arrangements, appetite for acquisitions.

Figure 2 depicts the broad methodology for regulated utilities:

Figure 2



Profile of Key Characteristics by Rating Category

Figure 3 below describes the key characteristics of regulated electric utilities falling within each rating category.

Figure 3

Rating Category	Ownership	Market and Regulatory Position	Non-Regulatory Risks
Aaa	Wholly owned by a Aaa-rated sovereign with unquestioned support if needed	Regulatory framework allows full cost recovery. No evidence of a regulator ever blocking regulated price rises. Large and well-protected service area. Support for the electric transmission system outweighs customer considerations. No or very limited competition. If owned by a Aaa-rated sovereign, the risk is deemed equivalent to that of the Aaa parent.	Zero or immaterial when considering revenue, earnings, cashflow and assets.
Aa	Wholly or majority owned by a Aaa or Aa rated sovereign or investor-owned with an effective monopoly and highly supportive regulation	Regulatory framework allows full cost recovery. No evidence of a regulator ever blocking regulated price rises. Large and well-protected service area. Support for the electric transmission system outweighs user considerations. No or very limited competition. Financially robust under all scenarios with unquestioned access to the financial markets and very strong liquidity. Many companies in this category are either sovereign-owned or are deemed to have certain support from the regulatory system or government in times of stress.	Non-electric utility businesses are predominantly low-risk businesses such as natural gas distribution

Figure 3

Rating Category	Ownership	Market and Regulatory Position	Non-Regulatory Risks
A	Wholly or partially owned by a Aa or A rated sovereign or rating is based on intrinsic strength without factoring in any uplift for sovereign ownership; or investor-owned with highly predictable and reliable regulation.	Medium to large-sized companies where the core operation is a stable, regulated electric utility business. Well-capitalized companies with moderately strong financials, that face more business risk and/or have weaker financial metrics than the issuers in the Aa category. If exposed to substantial competition, cost structure and rates are highly competitive for their region. Companies in this category often face greater competitive pressures than those in the Aa rating category. The regulatory environment has above-average stability and reliability. Recovery of costs under regulated rates is fairly predictable with automatic fuel and purchased power recovery provisions in some jurisdictions. Service territory has moderate to strong demographics. Customer base is predominantly commercial and residential, and issuer has only modest potential for harm from loss of important industrial customers. There may be some history of a lack of support by regulators on large spending decisions for the regulated business but any amounts disallowed have had only a modest impact on the issuer's creditworthiness.	Larger companies in this category may have substantial non-regulated businesses but the overall profile remains dominated by regulation. Smaller companies in this category are likely to have very limited unregulated activities.
Baa	Wholly or partially owned by a A or Baa rated sovereign or rating is based on intrinsic strength without factoring in any uplift for sovereign ownership; or investor-owned with highly predictable regulation that has modest potential for unexpected rate outcomes.	Medium-sized and smaller companies with average to below-average capitalization and cash flow coverages, that face more business risk and have weaker financial metrics than the issuers in the A category. Core operations are dominated by fairly stable integrated electric utility businesses. Issuers may be more exposed to competition, less competitive in costs and rates in their region, and may be at risk for the loss of large industrial customers. There may be substantial competition for wholesale customers and some competition for retail and small commercial customers. The regulatory environment has average to below-average stability and reliability. The regulatory environment may sometimes be challenging and politically charged. Recovery of costs under regulated rates is usually predictable with fuel and purchased power recovery provisions in some jurisdictions, but there is a greater tendency for regulatory surprises. There may be some history of regulators disallowing large spending decisions for the regulated business and disallowed amounts may have had a meaningful impact on the issuer's creditworthiness.	Issuers may have other utility and energy businesses, especially natural gas distribution. Unregulated non-utility businesses may be substantial in size relative to the regulated business, and unregulated businesses may have a higher risk profile than is the case for most issuers in the A category. Some issuers in this rating category have substantial investments in higher-risk unregulated businesses, including merchant power, energy trading, oil and gas production, real estate, telecom.
Ba	Most of the issuers that are rated Ba are holding companies for regulated utility subsidiaries that are rated in the Baa category. Excluding emerging markets, very few regulated utility operating companies have speculative grade senior ratings.	Medium-sized and smaller companies with below-average capitalization and cash flow coverages, that face more business risk and have weaker financial metrics than the issuers in the Baa category. Core operations may include fairly stable integrated electric utility businesses, but these are offset by substantial debt-financed investments in unregulated activities that are higher risk or have performed poorly. Liquidity is likely to be weak, especially at the parent holding company. Bank financing may be secured and the issuer may have limited headroom under its covenants. Some issuers in this rating category are substantially more exposed to competition, less competitive in costs and rates in their region, and may be at risk for the loss of large industrial customers. There may be substantial competition for all types of customers: wholesale, retail, and small commercial. Regulatory environment may be inconsistent, with surprisingly unfavorable rate decisions or regulatory unwillingness to make timely changes to address unexpected market volatility. Issuer has below-average relationship with regulators. There may be uncertainty of recovery for spikes in costs such as for fuel or purchased power.	Compared to those Baa issuers that also have substantial riskier unregulated investments, the investments are proportionately larger in relation to the regulated utility business and have performed more poorly. Issuers may have other utility and energy businesses, especially natural gas distribution. Unregulated businesses have a higher risk profile than is the case for most issuers in the Baa category. Issuers in this rating category usually have substantial investments in higher-risk unregulated businesses, including merchant power, energy trading, oil and gas production, real estate, telecom.
B	Some issuers in this rating category are majority owned by low-rated sovereign entities	Medium-sized and smaller companies with well below-average capitalization and cash flow coverages, that face more business risk and have weaker financial metrics than the issuers in the Ba category. Core operations may include fairly stable integrated electric utility businesses in some cases, but these are outweighed by large highly risky unregulated activities that were debt-financed and have performed extremely poorly. Some issuers have very poor regulatory relationships. Regulators may have engaged in second-guessing of spending decisions and denied recovery of amounts that jeopardize the issuer's ability to fund its ongoing business activities. Liquidity is likely to be very weak, especially at the parent holding company. Bank financing may be secured and the issuer may have limited headroom under its covenants. There is a significant risk of detrimental sovereign actions such as: politically motivated interference in the ratemaking process, actions based on social/political needs rather than financial returns. There may be a history of using the utility as a government funding source. These issuers also face higher potential for disruption in power and financial markets. The financial profile of these issuers may be relatively strong but susceptible to rapid deterioration.	Unregulated businesses tend to be higher-risk activities, including merchant power and energy trading.

Stand-Alone Company Credit Risk Factors

QUALITATIVE FACTORS

General rating methodology

Moody's framework for rating regulated electric utilities is constructed around a number of credit risk factors rather than on any one particular metric such as a financial ratio.

The first step is to assess the extent of a "regulated" company's exposure to unregulated businesses. The strongest position is enjoyed by those companies operating in a wholly regulated business. However, the majority of the companies we consider in this sector have additional exposure to unregulated businesses, whether those are unregulated power generation or supply activities or non-electric unregulated businesses.

The second step in the methodology is to assess the credit support that is gained from operating within a particular regulatory framework. Moody's considers each regulatory system and assesses whether there is a high or low expectation of predictability in the system and whether operators can reasonably expect to recover their costs and investments through regulator-approved revenue increases.

The third step is to consider the exact level of risk posed by the unregulated business. Note that a relatively small, but high-risk, unregulated business has the capacity to cause a major credit deterioration for the entity as a whole.

This then leads to an overall assessment of the qualitative business risk of the company's activities.

Each of these steps is now considered in more detail.

Assessment of the extent of regulation around a business

Moody's classifies companies into four categories to determine how much their business risk is influenced by regulated activities.

This is a measure of the relative weight of regulated to unregulated business within a rated entity. Weighting is based on the element of earnings, cashflows and assets that fall within or outside a regulatory framework. In order to define the "unregulated business" percentage, Moody's takes the highest percentage out of the three measures respectively based on earnings, cashflows and assets. This then allows us to derive the regulated business percentage and to assign the entity to one of the four categories as below:

Category 1: A wholly regulated business

Category 2: 80-99% of the business is regulated

Category 3: 60-80% of the business is regulated

Category 4: 40-60% of the business is regulated

Assessment of the supportiveness of the regulatory framework

We also classify entities into the following four categories based on a comparative assessment of the predictability and stability of regulated cashflows for a company operating under a particular regulatory framework – or the Supportiveness of Regulatory Environment (SRE):

SRE 1: Regulatory framework is fully developed, has shown a long track record of being highly predictable and stable and there is a very high expectation of timely recovery of costs and investments.

SRE 2: Regulatory framework is fully developed, is predictable and stable and there is a high expectation of timely recovery of costs and investments.

SRE 3: Regulatory framework is well developed but there is a lower assurance of timely recovery of costs and investments; there may also be evidence of some inconsistency or unpredictability in the way that the regulatory framework has been applied.

SRE 4: Regulatory framework is still being developed, is unclear, is undergoing considerable change or has a history of being unpredictable.

Consideration is given to the substance of a regulatory ringfence including restrictions on dividends, restrictions on capex and investments, separate financings, separate legal structure, and limits on the ability of the regulated entity

to support its parent company. There is more credit uplift if these provisions are contained within a license or clear regulatory rules rather than in financing documents that can be renegotiated.

In general, Moody's sees regulatory frameworks as being fundamentally designed to achieve a balance between supply reliability and service, efficiency, prices, and financial returns to the utilities. All jurisdictions consider all of these factors, but there are regional differences in their application and degree of emphasis, as discussed below:

- Protecting the "system" to ensure a reliable supply. In such cases, the company receives considerable implied support from the government, which may be at the expense of the end-user. Japan is an example of a system that emphasizes these factors more heavily. Other examples would include systems where considerable infrastructure build-out is needed and incentives for investment outweigh the need to control customer prices. Italy and Spain are examples of jurisdictions that emphasize these factors more strongly.
- Protecting consumers from monopoly over-charging or from sudden large rate increases that could be imposed more gradually. When these concerns are more heavily weighted, companies are at financial risk if they cannot economically deliver a service at the regulated price. Some degree of financial deterioration of the utility may be accepted in the interests of protecting consumers from higher prices. California demonstrated a heavier weighting of these factors when wholesale market prices spiked in 2000-2001.
- Attempting to achieve a balance between satisfying the need of companies to be able to provide a return to their stakeholders and endeavoring to encourage efficiency and hold down prices. The regulatory systems of Australia and the UK are good examples of models that consistently stress these factors most heavily.

Examples of regulatory frameworks in each category:

SRE 1: Australia, Canada, Iceland, Finland, Hong Kong, Japan, UK

SRE 2: Austria, France, Germany, Italy, New Zealand, Portugal, Netherlands, Norway, Singapore, Spain, Sweden, U.S. states: Alabama, Delaware, District of Columbia, Florida, Georgia, Hawaii, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Mississipi, Nebraska, New York, North Carolina, Oklahoma, Oregon, Rhode Island, South Carolina, Tennessee, Utah, Virginia, Washington, Wisconsin

SRE 3: Chile, Czech Republic, Estonia, Greece, Israel, Korea, Latvia, Malaysia, Taiwan, Thailand, U.S. states: Arizona, Arkansas, California, Colorado, Connecticut, Idaho, Illinois, Kansas, Louisiana, Maine, Michigan, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, North Dakota, Ohio, Pennsylvania, South Dakota, Texas, Vermont, West Virginia, Wyoming

SRE 4: Brazil, Bulgaria, China, Colombia, India, Indonesia, Philippines, Romania, South Africa

Assessment of the risk of the unregulated businesses

A key component of Moody's ratings of electric utility companies is an individual assessment of the business risks as well as the financial risks for each company. The regulated activities of electric utility companies generally are more stable and carry lower risk than the business activities of most other corporate entities. As a result, utility companies are rated substantially higher than industrial companies that have a similar financial profile.

However, as noted above, many companies in the electric utility industry have a mix of regulated and unregulated businesses. These companies typically combine a low-risk electric utility business and what is in most cases a higher-risk unregulated business. The risk contribution from the unregulated businesses is determined by:

1) The relative proportion of the total company's business that comprises unregulated activities; and

2) The degree of risk of the particular unregulated activities.

Companies that have substantial unregulated activities that carry high or medium risk require stronger financial ratios to achieve a particular rating level than companies whose unregulated activities are small in size or are low in risk. Note that a company with a low-risk business profile will be rated more highly than a company that has the same financial profile but which has larger or higher-risk unregulated activities. The presence of a high proportion of risky non-regulated businesses could account for as much as a six rating notch differential over another company that was in a wholly regulated business.

Figure 4 shows a broad categorization of the relative riskiness of unregulated activities that are commonly part of the business of electric utility companies. These are grouped into broad categories of high, medium and low business risk. These classifications are general and do not fully capture individual company characteristics or differences in regional markets. For example, uncontracted wholesale power generation is likely to be riskier in the US, where the market is fragmented, than in Germany, where a smaller number of companies have relatively large market shares.

This categorization of the risks of unregulated businesses can be summarized as follows:

Category 1 – High

Category 2 – Medium

Category 3 – Low

Figure 4

High Business Risk
Merchant power generation that is located in highly competitive markets or merchant power generation that is high-cost and is not sold under long-term contract to a highly creditworthy counterparty.
Energy trading and marketing that is speculative or market-making in nature.
Investments in unregulated international power assets in unfamiliar markets.
Various investments outside the core area of industry expertise. Frequent areas for such diversified investment include: telecommunications; oil and gas exploration and production; and real estate development.
Medium Business Risk
Merchant power generation in markets in which competition is limited by the large market share of each participant, by geographic isolation, or by the utility's control of critical production and transmission infrastructure, or because the unregulated generation is relatively low-cost.
Affiliated energy generation and supply businesses that sell primarily under contract to the regulated utility or within the utility's core market area.
Energy trading and marketing that is strictly limited to trading around the utility's physical generation and transmission assets, with little or no market making trading.
Operation of coal mines or natural gas pipelines that are closely integrated with the utility's regulated generation business as the source of fuel for the regulated power plants.
Low Business Risk
Unregulated electricity generation that is wholly sold under long-term contract to highly creditworthy counterparties which assume all risk of fluctuation in the market prices of fuel and electricity.
Unregulated or lightly regulated electricity generation that is very well insulated from competition because of the utility's high market share or its ownership and tight control of the key infrastructure assets that are needed to generate or deliver electricity.
Selling and maintaining customer equipment that is related to the core utility business, or contractual arrangements to manage customers' fuel and electricity needs, under which the customer retains all risk of fluctuation in market prices.

High-Business-Risk Unregulated Activities

This higher business risk category includes merchant generation in highly competitive markets, energy trading and marketing that is speculative or market-making in nature, and unregulated electric generation investments in unfamiliar or poorly developed markets.

Merchant energy is considered to include unregulated power generation for which the output is not sold under long-term contract with a creditworthy counterparty. In the merchant model, power is sold into the competitive or merchant market, and cash flows are subject to market price volatility. The absence of contracts results in less predictable cash flows and higher business risk.

Energy marketing and trading is a related activity that often has a high level of risk associated with it. There can be substantial differences in the riskiness of energy trading and marketing, depending upon the strategy and size of this activity. Speculative trading activity has the potential to produce large swings in income or loss, has limited risk transparency, and may result in large swings in liquidity needs. Trading and marketing activities that are ancillary to a core utility business (trading around the physical assets) are considered to be much less risky than pure proprietary or speculative trading. However, all energy trading is viewed as having a higher business risk profile than regulated activities.

A number of other investments outside the core sector of industry expertise are likely to fall into the high business risk category. Such areas of diversification may include telecommunications, equity investments in leases, oil and gas exploration and production, miscellaneous manufacturing and real estate development.

Some companies have high-risk businesses that are sizeable in comparison to the more stable regulated business. These companies are expected to have financial ratios that are closer to those of an unregulated industrial company in the same rating category, in contrast to the financial ratios typical for a lower-risk regulated utility company. Companies with substantial high-risk activities will need lower leverage, and stronger cash flow coverage ratios to qualify for a particular rating category.

Medium-Business-Risk Unregulated Activities

Unregulated electricity generation may be medium-risk if competition is substantially limited by the structure of the market or by the generators' control over production and transmission infrastructure that is needed to reach customers, or if the unregulated generation has costs that are well below-average.

Also likely to fall into this category is unregulated generation that is largely sold back to the regulated utility without long-term contracts. This activity has a lower risk than merchant sales to third parties if the generating assets are advantageously located for the regulated utility. This is particularly likely when generating assets have been legally separated from the regulated utility. As part of the transition to deregulation, many utilities were required to disaggregate their generation, and these plants were often put into affiliated supply companies under a common parent holding company, but continue to sell a large portion of their output to the affiliated regulated utility.

Medium-risk unregulated generation is likely to have significant exposure to fluctuations in the price of fuel, or capital spending needs to maintain competitiveness or to meet environmental requirements.

Lower-Business-Risk Unregulated Activities

This category includes unregulated generation of electricity that is sold under long-term contract to highly creditworthy counterparties, with the purchaser bearing the risk of any change in the market price of fuel and wholesale power.

Unregulated electricity generation may also be low-risk if there is little competition due to the structure of the market or the generators' exclusive control over critical production and transmission infrastructure that is needed to reach customers.

Below-average costs are not necessarily sufficient for unregulated generation to be classified in the low-risk category. Without other mitigating factors being present, low-cost merchant generation is likely to be classified as medium-risk due to the potential for changes in relative cost competitiveness as market conditions change.

Conclusion on Qualitative factors

This analysis of qualitative factors – the split of regulated versus non regulated activities and the respective risk analysis of those businesses – allows us to determine how stable and predictable we feel the cashflows of the company should be. The lowest business risk will be a company with wholly regulated activities in a supportive regulatory framework. The highest business risk will be a company with a high degree of exposure to non-regulated businesses when those businesses are viewed to be relatively high-risk.

Companies with a lower business risk can have weaker financial metrics than one with higher business risk for the same rating category.

QUANTITATIVE FACTORS

Key ratios

Moody's uses financial ratio analysis as part of our quantitative analysis of all corporates, including electric utilities. Ratio analysis is a helpful way of comparing one company's performance to that of another and the performance in one year to that in another.

However, the importance of ratio analysis can be overstated. No two companies look exactly alike from a qualitative assessment standpoint and each company we rate is constantly changing. It is impossible to assign an accurate credit rating on the basis of financial ratio analysis alone, even less so on the basis of any one ratio. Therefore, Moody's does not have any specific "hurdle rate" to explain which ratio will make the difference between any two rating categories.

Nonetheless, we have identified six core ratios which we consider to be the most useful when looking at an electric utility company. These are supplemented by other ratios which are particularly useful for various local regulatory frameworks.

The six core ratios[1] are as follows:

Primary:

1. Retained Cashflow[2] / Adjusted gross debt[3]
2. FFO / Adjusted gross debt
3. FFO / Interest
4. Adjusted gross debt / Regulated Asset Value[4], or Capitalization

Secondary:

5. EBITDA Margin
6. Retained Cashflow / Capex

While other factors considered in this report may outweigh pure quantitative analysis, it is possible to provide broad guidance on the ratio ranges that may generally be seen at different rating levels.

In general, other factors – such as the degree of likely support from a sovereign – tend to outweigh financial ratios for companies operating in a very low business risk environment such as Japan or Finland. Similarly, considerations such as an undeveloped regulatory framework, potential political risk or relatively opaque corporate governance may outweigh financial ratios for companies operating in a high business risk environment. Our analysis also considers prospective future performance, which may differ from historic ratios.

Financial ratios are more useful for companies operating in a low business risk environment where there is a high degree of regulated activities and a supportive regulatory system. This might include the UK, US transmission and distribution utilities (T&Ds), Canada or many European countries. Medium-business-risk operating environments would include US integrated utilities.

As noted above, this is a local industry found globally rather than one where companies compete with each other outside their own local area. While companies in, say, Japan or in the US or in Germany, all tend to have similar profitability dynamics, there is little global similarity. Hence, measures of profitability are helpful in rank-ordering companies within their own local regulatory operating environment, but not helpful as a global indicator of ratings.

Measures of interest cover, cashflow to debt and balance sheet measures tend to be more consistent across the whole universe of global regulated electric utility companies.

As a guide, the following primary ratios, as set out in Figure 5, might be expected for a utility company without factoring in any uplift for possible sovereign support.

Figure 5

	Aa	*Aa*	*A*	*A*	*Baa*	*Baa*	*Ba*	*Ba*
Business risk	***Medium***	***Low***	***Medium***	***Low***	***Medium***	***Low***	***Medium***	***Low***
FFO int. cov. (X)	> 6	>5	3.5-6.0	3.0-5.7	2.7-5.0	2-4.0	<2.5	<2
FFO/Debt (%)	>30	>22	22-30	12-22	13-25	5-13	<13	<5
RCF/Debt (%)	>25	>20	13-25	9-20	8-20	3-10	<10	<3
Debt/Capital (%)	<40	<50	40-60	50-75	50-70	60-75	>60	>70

Other utility-specific issues relevant to quantitative analysis

Power Purchase Agreements ("PPAs")

Although many utilities own and operate power stations, some have entered into PPAs to source electricity from third parties to satisfy retail demand. The motivation for these PPAs may be one or more of the following: to outsource operating risks to parties more skilled in power station operation, to provide certainty of supply, to reduce balance sheet debt or to fix the cost of power. While Moody's regards these risk reduction measures positively, some aspects of PPAs may negatively affect the credit of utilities.

1. *Please see Appendix 2 for definitions.*
2. *Retained Cashflow (RCF) is FFO less dividends*
3. *Moody's concentrates on gross debt but will also consider net debt ratios if the cash is clearly being held for future debt maturities or for reasons such as hedging. A good example of this would be a company that has hedged the exchange risk of an overseas investment with the local currency debt despite having surplus cash at the parent level. In such cases, the net ratio will take predominance over the gross ratio.*
4. *The Regulated Asset Value (RAV) or Regulated Asset Base (RAB)*

Under most PPAs, a utility is obliged to pay a capacity charge to the power station owner (which may be another utility or an Independent Power Producer – IPP); this charge covers the portion of the IPP's fixed costs in relation to the power available to the utility. These fixed payments cover debt service and are made irrespective of whether the utility requires the IPP to generate. When the utility requires generation, a further energy charge, to cover the variable costs of the IPP, will also be paid by the utility. Some other arrangements are characterized as tolling agreements, or long-term supply contracts, but most have similar features to PPAs and are thus analyzed by Moody's as PPAs.

Factors determining the treatment of PPAs

PPAs have a wide variety of financial and regulatory characteristics and are thus each particular circumstance may be treated differently by Moody's. The most conservative treatment would be to treat the PPA as a debt obligation of the utility as, by paying the capacity charge, the utility is effectively providing the funds to service the debt associated with the power station. At the other end of the continuum, the financial obligations of the utility could also be regarded as an ongoing operating cost, with no long-term capital component recognized. Factors which determine where on the continuum Moody's treats a particular PPA are as follows:

- Risk management: An overarching principle is that PPAs have been used by utilities as a risk management tool and Moody's recognizes that this is the fundamental reason for their existence. Thus, Moody's will not automatically penalize utilities for entering into contracts for the purpose of reducing risk associated with power price and availability. Rather, we will look at the aggregate commercial position, evaluating the risk to a utility's purchase and supply obligations. In addition, PPAs are similar to other long-term supply contracts used by other industries and their treatment should not therefore be fundamentally different from that of other contracts of a similar nature.
- Pass-through capability: Some utilities have the ability to pass through the cost of purchasing power under PPAs to their customers. As a result, the utility takes no risk that the cost of power is greater than the retail price it will receive. Accordingly Moody's regards these PPA obligations as operating costs with no long-term debt-like attributes. PPAs with no pass-through ability have a greater risk profile for utilities. In some markets, the ability to pass through costs of a PPA is enshrined in the regulatory framework, and in others can be dictated by market dynamics. As a market becomes more competitive, the ability to pass through costs may decrease and, as circumstances change, Moody's treatment of PPA obligations will alter accordingly.
- Price considerations: The price of power paid by a utility under a PPA can be substantially below the current spot price of electricity. This will motivate the utility to purchase power from the IPP even if it does not require it for its own customers, and to sell excess electricity in the spot market. This can be a significant source of cash flow for some utilities. On the other hand, utilities that are compelled to pay capacity payments to IPPs when they have no demand for the power or when the spot price is lower than the PPA price will suffer a financial burden. Moody's will particularly focus on PPAs that have mark-to-market losses that may have a material impact on the utility's cash flow.
- Excess Reserve Capacity: In some jurisdictions there is substantial reserve capacity and thus a significant probability that the electricity available to a utility under PPAs will not be required by the market. This increases the risk to the utility that capacity payments will need to be made when there is no demand for the power. For example, Tenaga, the major Malaysian utility, purchases a large proportion of its power requirement from IPPs under PPAs. PPA payment totalled 42.5% of its operating costs in FY2004. In a high reserve margin environment existing in Malaysia, capacity payment under these PPAs are a significant burden on Tenaga, and some account must be made for these payments in its financial metrics.
- Risk-sharing: Utilities that own plant bear the associated operational, fuel procurement and other risks. These must be balanced against the financial and liquidity risk of contracting for the purchase of power under a PPA. Moody's will examine on a case-by case basis which of these two sets of risk poses greatest concern from a ratings standpoint.
- Default provisions: In most cases, a default under a PPA will not cross-default to the senior facilities of the utility and thus it is inappropriate to add the debt amount of the PPA to senior debt of the entity. The PPA obligations are not senior obligations of the utility as they do not behave in the same way as senior debt. However, it may be appropriate in some circumstances to add the PPA obligation to Moody's adjusted debt, in the same way as other off-balance sheet items.[5]

5. *See "The Analysis of Off-Balance Sheet Exposures – A Global Perspective", Rating Methodology, July 2004.*

Each of these factors will be weighed by Moody's analysts and a decision made as to the importance of the PPA to the risk analysis of the utility.

Methods of accounting for PPAs in our analysis

According to the weighting and importance of the PPA to each utility and the level of disclosure, Moody's may analytically assess the total obligations for the utility using one of the methods discussed below.

Operating Cost: If a utility enters into a PPA for the purpose of providing an assured supply and there is reasonable assurance that regulators will allow the costs to be recovered in regulated rates, Moody's may view the PPA as being most akin to an operating cost. In this circumstance, there most likely will be no imputed adjustment to the obligations of the utility.

Annual Obligation x 8: In some situations, the PPA obligation may be estimated by multiplying the annual payments by a factor of eight. This method is sometimes used in the capitalization of operating leases.[6] This method may be used as an approximation where the analyst determines that the obligation is significant but cannot be quantified otherwise due to limited information.

Net Present Value: Where the analyst has sufficient information, Moody's may add the NPV of the stream of PPA payments to the adjusted obligations of the utility. The discount rate used will be the cost of capital of the utility.

Debt Look-Through: In some circumstances, where the debt incurred by the IPP is directly related to the off-taking utility, there may be reason to allocate the entire debt (or a proportional part related to share of power dedicated to the utility) of the IPP to that of the utility.

Mark-to-Market: In situations in which Moody's believes that the PPA prices exceed the spot price and thus a liability is arising for the utility, Moody's may use a net mark-to-market method, in which the NPV of the net cost to the utility will be added to its total obligations.

Consolidation: In some instances where the IPP is wholly dedicated to the utility, it may be appropriate to consolidate the debt and cash flows of the IPP with that of the utility. Again, if the utility purchases only a portion of the power from the IPP, then that proportion of debt might be consolidated with the utility.

In some circumstances, Moody's will adopt more than one method to estimate the potential obligations imposed by the PPA. This approach recognizes the subjective nature of analyzing agreements that can extend over a long period of time and can have a different credit impact when regulatory or market conditions change. In all methods the Moody's analyst will account for the revenue from the sale of power bought from the IPP. We will focus on the term to maturity of the PPA obligation, the ability to pass through costs and curtail payments, and the materiality of the PPA obligation to the overall cash flows of the utility in assessing the affect of the PPA on the credit of the utility.

Nuclear liabilities

In several integrated European companies, nuclear power generation form a significant component of their power generation activities. These activities will usually be unregulated but comprise an important element of the analysis of these companies. The analysis is complicated by the lack of consistency in treating nuclear related items in different countries.

In general, nuclear waste management obligations are factored into debt using Moody's methodology for unfunded pensions. This recognizes the uncertainty of final amounts and timing in assessing the likely call on future cash flows. The methodology simulates a pre-funding of the obligation, taking into account access to the equity market and management's probable funding strategy. The existing debt-to-equity mix is generally used as a starting point.

For ratio analysis purposes, Moody's excludes reprocessing provisions from its calculation of total nuclear liability provisions if such provision is expected to remain a permanent component of the nuclear liabilities that will continually be replenished as fuel is used in the production process in line with the expectation that nuclear power will remain an important component of the company's generation portfolio for the foreseeable future.

For nuclear provisions that are recorded and funded on balance sheet, Moody's does consider the impact of their inclusion on adjusted debt ratio. However, we do recognize that their inclusion does understate the company's degree of financial flexibility for meeting financial debt obligations given the long duration of those provisions. This

6. *For further discussion of the methodology of rating lease obligations see "Off-Balance Sheet Leases: Capitalization and Ratings Implications – Out of Sight But Not Out of Mind", October 1999.*

is because the cash outflows for these liabilities will not occur for a number of years and will then extend out in a form similar to operating expenses over a further extended period of time. This is taken into account by looking at both gross and net debt ratios.

U.S. Securitization

Beginning in the late 1990s, legislatively approved stranded cost securitization has become an increasingly used financing technique among investor-owned electric utilities. In its simplest form, a stranded cost securitization isolates a dedicated stream of cash flow into a separate special purpose entity (SPE) and uses that stream of cash flow to provide annual debt service for the securitized debt instrument.

Moody's generally treats securitization debt of industrial and financial issuers as being on-credit debt. The debt that is being securitized usually carries a rating that is higher than that of the issuing entity, and the assets that are being sold to the separate SPE are often of better quality than the assets that remain with the issuer.

Stranded cost securitization differs somewhat from other generic securitizations because the asset being sold is often of poor quality prior to the passage of legislation and the completion of a securitization. In most cases, the asset represents stranded costs that would have been written off by the utility in the absence of legislation allowing for recovery through a surcharge on regulated customers.

Instead, the state regulator – and sometimes the state legislature – establishes the authority for a surcharge on customers' bills, and authorizes the sale of securitized debt. The utility then sells the right to collect a dedicated stream of future cash flows from its regulated customer base that is sufficient to provide debt service on the securitized piece of debt. The issuing utility is typically required to use the proceeds of the debt offering to retire both debt and equity in a manner intended to maintain a predetermined capital structure. The securitization generally has language that enables the tariff to be unilaterally raised in the event that future sales turn out to be lower than originally planned.

Generally speaking, Moody's views stranded cost securitization as being credit-neutral to credit-positive since it typically addresses a major credit overhang, some form of potential stranded costs, and legislatively requires the utilities to use the proceeds for debt and equity reduction in a manner that targets a relatively conservative capital structure.

For the most part, the securitization tariff is separate from the "general tariff" charged to customers and any increase in the size of the securitization tariff is not at the expense of the general tariff. However, in two states, Illinois and Michigan, the utilities operate under a rate freeze, which precludes them from raising rates until the termination of their respective rate freeze. As such, any increase in the securitization tariff is at the expense of revenues and cash flow that would be available to service debt of the remaining creditors of the utility.

Along the same lines, Moody's notes that the size of the securitization tariff relative to the total tariff is an important element in evaluating the credit implications of a securitization because it can impact the future ability of a utility to obtain subsequent rate relief for other costs of service. In effect, customers do not discriminate between the securitization tariff and the general tariff when paying their bills. Consequently, to the extent that the securitization tariff needs to be increased, the financial flexibility and associated credit quality of the utility may be compromised, particularly if the securitization tariff is large relative to the general tariff and if the increase is taken from the cash flow of the utility. As a consequence, Moody's considers the impact that a securitization may have on the ability of the utility to raise rates in the future.

In calculating balance sheet leverage, Moody's treats the securitized bonds as being fully non-recourse to the utility even though accounting guidelines require the debt to appear on the utility's balance sheet. Consistent with this view, all balance sheet capitalization metrics exclude the securitized debt from the capital structure given the legal separateness that exists between the debt of the utility and the debt of the SPE, and the fact that regulators set future rates based upon a capital structure that does not include the securitization debt.

However, in looking at cash flow coverages, Moody's analysis stresses ratios that include the securitized debt in the company's total debt as being the most consistent with the analysis of comparable companies. This recognizes that regulatory approval for recovery of stranded costs and securitization are not always inextricably linked. Many utilities have approval for recovery of stranded costs but do not execute a securitization financing. Regulatory approval of stranded costs can be a credit transforming event when there is substantial doubt about recovery. However, the subsequent completion of a securitization financing does not change the amounts that are expected to be recovered. A securitization transaction does make it extremely unlikely that regulators can later disavow an agreement to allow recovery, and regulatory approval is often packaged together with a securitization with the view that ratepayers will benefit from low borrowing costs.

While our standard credit ratios for funds from operations to total debt and funds from operations interest coverage include the securitization debt, Moody's also looks at these two metrics without the securitization debt, to ensure that the benefits of securitization are not ignored. In making this adjustment, funds from operations is adjusted downward by the amount of principal amortization that is annually paid to the SPE in support of the securitization. Consistent with that adjustment, Moody's excludes the principal amount of securitization debt in the denominator in calculating a company's Adjusted FFO/Adjusted Total Debt and excludes the portion of a company's interest costs relating to the securitized debt when calculating a company's Adjusted FFO/Adjusted Interest. The analytical benefit of making this adjustment helps to determine the amount of residual cash flow (cash flow after satisfying securitization debt service) that is available to service the debt of general creditors.

The recent bankruptcy of Pacific Gas and Electric Company (PG&E) fortifies the strength of the legal separation among cash flows available to the SPE and cash flows available to the utility. Throughout the bankruptcy, funds dedicated to the securitization debt were collected by the utility and transferred on a daily basis to the trustee for the SPE creditors and PG&E's general creditors and the bankruptcy judge never challenged the continued transfer of such funds to the SPE. For this reason, the securitization debt of PG&E remained rated Aaa while the company operated in bankruptcy for more than three years.

ADDITIONAL RISK CONSIDERATIONS

Analysis of Multiple Legal Entities within a Single Issuer Family

Utility companies may have multiple legal entities within a single consolidated organization. This is the prevalent legal structure in the US, even for small utilities. The multiple-entity legal structure is also common in Canada and the UK and is employed by a number of the larger international utilities in other countries. In the US, most utility families have an unregulated holding company. The holding company will have one or more regulated operating subsidiaries, and may have one or more unregulated subsidiaries. Most utility families in the US issue debt at multiple legal entities within the organizational family.

In the case of multiple legal entities within a single issuer family, our approach is to assess each issuer on a stand-alone basis as well as evaluating the creditworthiness of the consolidated entity. We then assess the degree of legal and regulatory insulation that exists between the lower-risk regulated entities and the higher-risk unregulated entities.

The degree of notching (i.e. the rating differential) between entities in a single family of companies depends upon the degree of insulation that exists between regulated and unregulated entities. If the regulatory framework or regulatory practice establishes that there is substantial ring-fencing type insulation for the regulated entity, there may be three or more notches of rating differential between the regulated and the unregulated entities. If there is little or no ring-fencing, there will usually be only a one- or two-notch differential between the unregulated entity (in most cases a holding company) and the regulated entity (in most cases an operating company).

Regulatory ring-fencing for utilities may include minimum equity requirements, limitations on the movement of funds from regulated entities to unregulated entities, and prohibitions against credit support by regulated entities for unregulated entities. This may exist by statute, but most typically takes the form of rules that are established by the regulator. In the United States, where these provisions are most common, the rules may differ for individual utilities in the same state.

Many regulators restrict the ability of utilities to extend intercompany loans, guarantees, or to make payments to unregulated affiliates and parent holding companies. For example, utilities in the state of Wisconsin may only pay dividends to their unregulated holding company (the ultimate parent company in these organizations) in excess of an amount established in each rate case if common equity falls below an authorized level.

Regulators also often have wide discretion to impose new restrictions on regulated entities when the utility appears to be threatened by weakness of its unregulated affiliates. For example, the state regulatory commission in Oregon established tight limitations on any movement of funds by Portland General to its parent company when the parent company filed for bankruptcy protection. These ring-fencing protections were a key reason that Portland General did not default or experience substantial financial distress while its parent was in bankruptcy.

Where regulated utility entities are not well insulated from unregulated affiliates, the ratings of these entities will be notched fairly closely, generally within one or two notches. This will be the case even when one entity has substantially stronger financial ratios than its affiliate, if there is little or no restriction upon movement of funds between the two entities, or if there is a substantial operational interdependence. For example, where the regulated utility is highly dependent upon contractual purchases of power from its unregulated generating affiliate, the ratings of

these two entities will likely be one or two notches apart even if their individual financial profiles would suggest different ratings on a stand-alone basis.

Where regulated utility entities are strongly insulated from unregulated affiliates through prohibitions on loans and credit support, where there are strong regulatory limitations on dividends, and where there is little or no operational interrelationship between regulated and unregulated affiliates, the ratings will be driven more by the stand-alone credit quality of each entity, and may be three or more notches apart.

Non-specific utility risk factors

The majority of the risks considered in this rating methodology are specific to utilities. However, lenders to utilities are also exposed to many of the risks that are common to all industrial companies. These are not covered in detail here as a full analysis can be found in the relevant Moody's research. However, it should be noted that such factors may potentially outweigh the utility-specific considerations covered in depth in this report.

For example, a company that currently shows very strong financial ratios and operates in a supportive regulatory framework could still have a relatively low rating if it had very weak liquidity arrangements or high "event risk" such as if it were pursuing an acquisition policy that was very likely to result in a change in the company's business risk policy going forward.

The generic industrial company risks to which a utility may also be exposed include the following:[7]

- An assessment of the adequacy of the company's liquidity arrangements[8]
- An assessment of the quality of its corporate governance arrangements[9]
- An assessment of the quality of its management – their experience, appetite for risk and ability to fulfill the company's stated strategy
- An assessment of event risk and the probability that this could lead to a change in the company's financial position, business risk profile or its regulatory and political operating environment[10]
- Exposure to off-balance sheet risks[11]
- The potential support of or interference by a sovereign or sub-sovereign entity[12]

Regional Considerations

RATING DIVERGENCE LIMITED AMONG JAPANESE UTILITIES

Japanese electric utilities are rated in a relatively narrow range from Aa3 to A1. This reflects Moody's view that the conservative and predictable regulatory regime, and the individual companies' solidly established franchises in their operating regions, will not lead to major differences in credit risks among the rated utilities. Their financial profiles are more or less comparable, and they have simple corporate structures and limited business diversification exposures.

Moody's rates the three utilities that cover Japan's three largest economic areas at Aa3 (Chubu Electric Power, Kansai Electric Power, and Tokyo Electric Power), and six other utilities at A1 (Chugoku Electric Power, Hokkaido Electric Power, Hokuriku Electric Power, Kyushu Electric Power, Shikoku Electric Power, and Tohoku Electric Power).

Japan's regulator makes the maintenance of supply security its primary policy objective, followed in priority by environmental protection and, finally, allowing market mechanisms to work. This approach preserves utilities' integrated operations and makes them responsible for final supply to users in the liberalized market.

The government is gradually deregulating the industry and expanding the liberalized market. This market, which was partially introduced in 2000, was expanded from about 26% of the total to about 40% in April 2004, and will be

7. *See, for example, "Industrial Company Rating Methodology", July 1998*
8. *See, for example, "Moody's Liquidity Risk Assessments – Q&A", March 2002, "Moody's Analysis of US Corporate Rating Triggers Heightens the Need for Increased Disclosure" and "Rating Triggers in Europe: Limited Awareness but Widely Used Among Corporate Issuers", September 2002*
9. *See, for example, "U.S. and Canadian Corporate Governance Assessment", August 2003 and "Moody's Findings on Corporate Governance in the United States and Canada: August 2003 - September 2004", October 2004*
10. *See, for example, "Event Risk's Four Horsemen of the Apocalypse: Decapitalization, Cash-financed M&A, Litigation, and Accounting Irregularities", November 2000 and "Event Risk For European Corporates 2003 – Still A Credit Risk, Still Part Of Our Analysis", February 2003*
11. *See, for example, "The Analysis Of Off-Balance Sheet Exposures: a Global Perspective", July 2004*
12. *Note: Moody's paper "The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies" February 2005 which may effect the ratings of, for example, a municipality supported by a regional or national government.*

further expanded to about 63% in April 2005. However, the pace of deregulation has been set as moderate so that the regulator can monitor the risks and the effects on the power companies, especially in the context of supply security.

The Japanese utilities hold strongly established franchises in their operating regions, maintaining dominant market shares despite the market for large customers being deregulated. Some utilities still hold 100% shares.

Direct competition among integrated utilities has been very limited. This is mainly because: (1) each integrated operator holds a solid franchise in its operating region due to effective regional monopolies; (2) the companies display similar cost positions, and achievement of any meaningful differentiation in pricing is difficult; (3) the utilities are fully aware that an aggressive challenge by one utility in another's franchise would trigger industry-wide competition, which would, in turn, significantly weaken the industry's overall profitability; and (4) all the utilities exhibit similarly leveraged balance sheet positions and place priority on debt reduction, having completed most of their major investments.

In addition, the ability of power producers and suppliers (PPSs) to take utilities' shares has been restrained by limitations on: (1) their ability to purchase power from, for example, captive power plants; (2) their opportunities to build competitive plants on their own; and (3) their marketing abilities.

Although PPSs have been gaining minor shares in some utilities' franchise areas, and some are constructing their own power plants, their aggregate share is expected to remain insignificant over the intermediate term, due to power companies' rate strategies aimed at protecting their franchises and PPSs' ongoing limited access to power sources.

As such, although the rates are to be further lowered through the ongoing deregulation process, we expect the utilities' franchises to remain solid and stable over the intermediate term.

Government energy policy has made nuclear generation a core power source, while leaving actual implementation of the policy – construction and operation of nuclear power plants – to privately owned and managed utilities. Thus, these companies play an important role in the nation's energy policy, although the government remains the main driver by establishing and maintaining their nuclear power operation systems.

The government is now reviewing the economic feasibility of the nuclear fuel cycle, the allocation of back-end costs, and power utilities' reserves for back-end costs. While the outcome of the review could affect utilities' investment, cost, and balance sheet positions to some extent, we do not expect any significant changes in their policy role, business risks or cost competitiveness.

EUROPE

EU policy is the driver for regulatory development in Europe

The EU Electricity Directive of 1999, subsequently amended by the EU Energy Council in 2002, set the roadmap towards full supply liberalization in the European Union as well as addressing issues such as non-discriminatory access to the transmission grid and the granting of new generation licenses. The current aim is to have full liberalization within the EU by 2007.

Despite EU policy, there is a regulatory patchwork across Europe

Despite the EU directive, there is some flexibility in its implementation, leading to different regulatory models. The process has in most cases led to the establishment of an independent regulator, although the degree of independence from government influence varies significantly. In some countries, such as Spain and Greece, the government maintains control for final setting of tariffs and the regulator acts in an advisory capacity, whilst at the other end of the spectrum are those countries where there is a fully independent regulator, such as in the UK.

Having achieved full supply liberalization, the regulator can focus on regulating the monopoly wires activities – transmission and distribution. The UK has adopted an ex-ante approach, with a tight regulatory framework for wires activities. "Ex-ante" means setting the tariffs in advance, normally for a 3-5 year period, and the regulator allows the company to recover operating and capital expenditures as well as a return on capital. Normally the regulator will benchmark companies against their peers and will allow certain revenues (a revenue or price cap), often adjusted for inflation and an efficiency incentive, depending on how efficient the company is perceived to be.

By contrast, Sweden and Finland initially adopted a much lighter "ex-post" system, which allows companies to set their own prices to achieve a reasonable return on a cost-plus basis, with an arbitration mechanism to allow for complaints and remedies. Despite this looser regime, prices in these markets have been some of the lowest in Europe, benefiting no doubt from the overall greater price transparency from a fully liberalized market. However, under

further direction from the EU, Finland and Sweden (and Denmark) are now moving towards an ex-ante regime and this we would expect to become the norm in Europe.

Germany has yet to establish an independent regulator – although it is now moving in this direction – with network tariffs being set within the context of a voluntary agreement between utilities. Access tariffs are set on a negotiated basis, but in practice the German market is difficult and expensive for new entrants to access.

In Moody's view, power shortages in 2003 have led to an easing in regulatory pressure as security of supply displaces cost as a key aim

Regulators initially introduced quite harsh efficiency incentives or tariff caps, with tariffs reduced in real terms as companies have become more efficient. However, recent tariff pressure has been upward, e.g. Spanish tariffs fell in real terms between 1996 and 2002 but the current tariff framework now allows for gradual increases. This can be explained by greater concern over security of supply, with Europe having experiencing blackouts during 2003. Moody's believes that regulators wish to ensure that an incentive to invest remains, particularly as some aged thermo capacity and a number of nuclear plants are earmarked for decommissioning in the next few years.

In Central and Eastern European countries, regulation is following in a similar direction but at a slower pace

Central and Eastern European countries and the Baltic states are following EU directives, but are at an earlier stage of regulatory evolution. Whilst most have put in place at least the first Energy Law, implementation is often at an early stage under an extended implementation timetable or relatively new and untested. Many of these countries have now established an independent regulator although there is still a state-owned incumbent with a dominant or monopoly position.

These countries typically face privatization, structural separation (generation, transmission, distribution and supply), tariff increases and issues concerning cross-subsidization – with accession states such as Romania and Bulgaria aiming to have completed the process by 2007. Electricity market development is often linked to the economic and structural development of the country in which they operate. Indeed, the requirements of the IMF or World Bank may allow for only a gradual increase in tariffs (Romania and Bulgaria).

From a credit perspective, whilst the timely recovery of all costs may be delayed or constrained, the impact of such can be mitigated by the dominant market position of these key utilities and/or their strategic importance to the State and the role they play in the development of the economy.

Rating the UK regulated transmission and distribution companies

The UK electricity system is divided into a number of monopoly areas for the high-voltage transmission and lower-voltage local distribution of electricity. There is one monopoly transmission area and 12 Distribution Network Operators (DNOs) covering England and Wales. Two additional companies have the monopoly rights to transmission and distribution in distinct areas within Scotland. As these businesses are monopolies they are subject to price control regulation primarily aimed at protecting the consumer's interests.

All of these businesses are regulated by the Office of Gas and Electricity Markets (OFGEM). OFGEM itself is an independent body governed by an authority made up of independent, non-executive Directors and an Executive team. OFGEM is not part of the UK government but its duties and powers were established by Acts of Parliament and they must have regard to guidance from the government on issues such as protecting the environment.

The revenue that a monopoly business can earn on its regulated business is restricted by an RPI-X price control formula that is reviewed every five years. The formula is designed to allow a company to increase prices to reflect inflation while encouraging efficiency through a "-X" from the RPI. In addition, at the start of each regulatory period, prices are raised or reduced by a one-off price adjustment known as the P_0 adjustment. In order to calculate the "X" and the "P_0" for each company, OFGEM considers the Regulatory Asset Base of each company and sets a formula to provide a fair rate of return on those assets, typically around 6-7%. The next regulatory period for the transmission companies starts in 2007 and for distribution companies in 2005.

The practical regulation system involves a very detailed analysis of each company's regulated asset base and operating and capital expenditures. The output is a very detailed and highly predictable cashflow forecast for the next regulatory period. If the companies can improve efficiency, then they can retain most of the benefit. However, if they lose efficiency or the regulatory outcome proves unachievable, then this is a risk for the stakeholders in that company.

For Moody's, the ratings of these businesses depend upon two key factors:

1. The projected financial position of the company once the final regulatory outcome is known. This is measured by a number of financial ratios including FFO interest cover and Debt/Regulated Asset Value.
2. The additional burdens placed on the regulated entity's cash flows by its parent, mainly in the form of additional parental debt which needs to be serviced by dividends from the regulated operating company.
3. DNO-specific issues such as unfunded pension deficits unrelated to the distribution business, debt maturity profile and debt capital structure considerations.

According to OFGEM, after these adjustments, the intention is that all companies will earn the same baselines return of 6.6% on a pre-tax, real basis if they perform in line with the regulator's projections. The main issues are expected to be the need to increase capex to replace network assets and improve network performance, to put a greater emphasis on quality of service, and to respond to the growth in sources of renewable energy. These final determinations for the 2005-2010 price control period will become effective in April 2005.

The main rating implication from these proposals is likely to fall on companies whose overall financial profile is burdened by the need to pay large dividends to service and repay debt at holding company levels. While this can lead to a significant cash drain, the debt at the holding companies is outside the regulatory ringfence and is not protected by the OFGEM framework. One such holding company, Avon Energy Partners, has already defaulted on its debt obligations, while the operating company Midlands Electricity had no financial difficulties, thus illustrating that lending to such holding companies is significantly more risky than lending to the regulated entity itself.

When looking at the financial ratios for regulated UK DNOs, there are a number of important considerations to bear in mind:

1. The Regulated Asset Value (RAV) is an important reference point as allowable revenues and allowable capital expenditures both feed from or into this. Hence, the Debt/RAV ratio is one of the more critical financial ratios to consider.
2. OFGEM's scope of regulation is limited to the regulated entity, while Moody's rating of the DNO also factors in debt which must be serviced by cash flows from the DNO. This means that an RCF number (cashflow after dividends) is an important one for a DNO. It also means that ratios factoring in any "Holdco" debt tend to outweigh pure "stand-alone" DNO ratios. In practice, there are no remaining stand-alone DNOs.
3. Some DNOs retain cash to meet future debt maturities and where this is the case, the emphasis falls on net rather than gross debt numbers.

As a guideline and ignoring other considerations, the following ratios might be expected for UK DNOs at various rating levels, without factoring the need to support other group debt (if there is such debt, stronger ratios would be needed for the same rating level):

Figure 6

DNO	RCF/Net debt	Net debt/RAV	FFO interest cover
Aa	> 17%	< 45%	> 4.5 X
A	7 – 18%	40 – 68%	2.8 – 5.0X

AUSTRALIAN T&D RATINGS ARE HIGHER THAN UK RATINGS FOR COMPARABLE ENTITIES

Differences in regulatory philosophy between Australia and the UK mean that Moody's on average rates Australian electricity transmission and distribution (T&D) companies one notch above the ratings of their UK peers, even though both parties may have approximately the same level of debt coverage measures.

Furthermore, the impact of the regulatory differences is such that when Australian and UK companies share the same rating level, the Australian companies conversely exhibit weaker debt coverage measures. Moody's believes that the financial profiles of Australian T&D companies are sustainable within their present ratings, given their benign regulatory environments.

Moody's compared – on a senior unsecured basis – Baa-rated T&D companies in Australia and those in the UK. The projected average financial ratios for Australian T&D companies over the next few years are as follows:

Figure 7 – Average Financial Ratios for Baa Credits	
Debt-to-Regulated-Asset-Base	103%
RCF-to-Debt	4%
FFO-to-Interest	2.3 times

The UK T&D companies – on the other hand – have higher financial ratio hurdles at the Baa rating range. For instance, UK Baa-rated T&D companies are expected to have Debt-to-RAB ratio in the range of 60-90%, RCF-to-Debt 10-15%, and FFO-to-Interest of above 2.8 times.

On one level, the Australian and UK regulatory regimes are close matches. For example, regulators in both countries have adopted similar frameworks for determining revenues and returns. However, on a practical level, regulators in Australia have assumed a more benign stance on requirements for revenues and returns.

Moody's believes that this situation reflects the Australian regulators' approach in the following areas: (1) more generous cost allowances for maintaining minimum levels of service and system reliability for T&D assets; (2) appropriate levels of return for regulated T&D companies; (3) regulators' willingness to allow the retention of efficiency out-performances; and (4) greater certainty in regulatory outcomes at the next resets.

A comparison of recent tariff resets in both countries supports the conclusion that the Australian environment is more benign, a situation which Moody's believes will prevail over the medium term. Consequently, we do not expect an aggressive tariff decision at the next reset, scheduled for 2006 for electricity distributors in the state of Victoria.

In the UK, electricity distributors are undergoing a tariff reset for the five-year period commencing April 2005. The expected outcome for this reset is still evolving. However, the UK electricity distributors' cash flows could come under some pressure as the regulator restricts the ability of distributors to carry through to the next regulatory period the efficiency savings achieved. At the same time, distributors are expected to face higher cash commitments as a consequence of increased tax obligations and capital expenditure requirements to support various policy initiatives. As a result, UK T&D companies would need a more prudent set of financial policies to preserve their credit profiles.

While there is relative certainty in the Australian regulatory environment over the next reset period, it is more difficult to predict with confidence developments in regulatory thinking over the longer term. Consequently, Australian T&D companies must adopt prudent financial policies in readiness for a possible evolution in regulatory thinking at the end of the next regulatory period in 2010.

In this regard, companies that persist with highly leveraged capital structures on a Debt-to-RAB basis – that is, a ratio of over 100% – and exhibit no ability or commitment to de-leverage over the longer term may be more exposed to severe regulatory outcomes.

The ability of a company to de-leverage is indicated by the extent of free cash flow generation – relative to debt levels – after servicing all operational, debt, and dividend obligations.

UNITED STATES

The US electric utilities are characterized by a substantial diversity in both their business models and their regulatory risk. Business models vary from the lowest-risk companies that have purely regulated activities and which operate in states that have supportive regulation, to the highest-risk companies that have substantial unregulated activities and which operate in states that have less supportive or less predictable regulation.

Moody's views the business risk of US utilities as being higher in most cases than that of utilities in some other developed countries, including Japan, Australia, and the United Kingdom. This difference in risk reflects the following factors:

1. State regulation is seen as less predictable than national regulation. State regulation is the primary form of regulation in the US. Compared to national regulators, state regulators represent a smaller economic region. As a result, Moody's believes that state regulators may be more likely to be responsive to the objections of local customers and politicians when a utility seeks a large rate increase to address a large increase in costs or capital expenditures. As noted in the default section in Appendix 3, failure to obtain timely rate increases was a key factor in four recent defaults by US utilities. In addition, various parties may seek to intervene in in U.S. state regulatory proceedings, which can cause delay and increased uncertainty.

2. A large fragmented market structure results in stronger competition in unregulated wholesale power markets. The US electric utility industry is fragmented in comparison to Japan and major countries in Europe. Although the US represents over one fourth of global electricity consumption, none of the US utilities ranks in the top ten in terms of revenues among global utility companies. As portions of the market have become deregulated, US utilities are more vulnerable to changes in wholesale power costs because their market share and market power is more limited than those of comparable utilities in most other countries. Regulators have strived to limit market power to protect consumers, resulting in longstanding legal and regulatory impediments to industry mergers and consolidation.
3. More volatile fuel and wholesale power markets. Natural gas prices are completely unregulated in the US, which can result in rapid and wide swings in prices. There is a large unregulated power market in the US, which responds quickly to changes in fuel costs and passes these changes through to wholesale power prices. This combination of factors can result in more rapid and wider swings in prices than in more controlled markets.
4. Low likelihood of extraordinary political action to support a failing company. Utilities provide an essential service, so financial distress has a high political profile. Governments in the US have broadly demonstrated a reluctance to intervene on behalf of troubled investor-owned utilities when this could be viewed as providing economic assistance to private shareholders. This approach is in sharp contrast to the large US municipal utility sector, in which supportive government action is far more likely. Governments in many other countries (for example, Japan or Canada) are perceived as being more likely to work with regulators and financial institutions to support electric utilities as highly visible entities that provide a critical service.
5. Holding company structures limit regulatory oversight. State regulators only have authority over the regulated operating utility. The vast majority of companies have established unregulated holding companies that have the ability to engage in higher-risk unregulated businesses in the hopes of earning shareholder returns that are higher than the returns provided for the regulated business.
6. Overlapping or unclear regulatory juridisction. The electric utilities industry in the US is characterized by regulation at both the federal and state levels. Traditionally, the federal government has regulated the interstate and wholesale transmission of electricity, while distribution and retail services to consumers have been regulated by the states. Each state exhibits its own unique regulatory characteristics which set the parameters and define the environment in which a particular utility operates. In some instances the jurisdictions can overlap, such as in the case of mergers and transactions with affiliates.

Federal Energy Regulatory Commission (FERC)

The key federal regulatory agency governing utilities in the US is the Federal Energy Regulatory Commission (FERC), an independent agency that regulates the interstate transmission of natural gas, oil, and electricity, as well as natural gas and hydroelectric power projects. In the electric market, the FERC's responsibilities include the approval of rates for the wholesale sale of electricity and transmission on an interstate basis for utilities, power marketers, power pools, power exchanges, and independent system operators. The FERC sets the price for those utility transmission systems that fall within its jurisdiction, although many portions of utility transmission systems fall under the jurisdiction of the state regulatory agencies.

In recent years, FERC has issued several orders aimed at opening the transmission lines of utilities in the US. In 1996, FERC Order 888 provided rules for open access of transmission lines to all suppliers and for competition in the wholesale market and set standards for regional transmission organizations (RTOs). In 1999, FERC Order 2000 encouraged utilities with transmission assets to voluntarily transfer control of their transmission systems to these RTOs, which could either be non-profit independent system operators (ISOs) or for-profit transmission companies. Although some utilities have transferred their transmission assets into RTOs, others have thus far resisted attempts to place their transmission assets under outside control.

Public Utility Holding Company Act (PUHCA)

The most significant piece of legislation governing public utility holding companies at the federal level is the Public Utility Holding Company Act, more commonly known as PUHCA. The Act was passed in 1935 to regulate interstate utility holding companies in response to the financial collapse of a number of such holding companies following the stock market crash of 1929. When utilities in different states combine or merge under a holding company, the new

entity becomes registered under PUHCA, which provides for SEC regulation of their financing activities, including the sale and purchase of securities and assets. PUHCA gives the SEC the power to exercise broad oversight over business combinations that result in functional or geographic diversification of utilities.

Historically, the SEC has severely restricted the types of business activities in which registered holding companies may engage. The National Energy Policy Act of 1992 (NEPA) eased some of the regulatory restrictions imposed by PUHCA by allowing registered holding companies to establish non-utility generating subsidiaries and to purchase foreign utilities without seeking prior SEC approval. However, registered holding companies are still prohibited from owning both electric and gas operations or possessing unregulated businesses without SEC approval. Although there have been a number of attempts over the last few years to repeal PUHCA, most recently as part of comprehensive energy legislation considered but not passed in 2003, it remains a key federal regulatory constraint and limitation for those holding companies registered under PUHCA.

State Regulatory Commissions

The most important regulatory factor affecting the sale of electricity by utilities at the retail level are state agencies generally known as Public Utility Commissions or Public Service Commissions. These commissions comprise elected or appointed officials in each state who determine, among other things, whether utility expenditures are reasonable and how they should be passed on to consumers through their electric rates. They also regulate each utility's rates of return and monitor the quality and reliability of a utility's electric service. The state-level factors that Moody's takes into consideration when evaluating the credit quality of utilities include the following:

- **Status of Deregulation/Retail Access**

Since industry restructuring began in the mid-1990s, states have taken a variety of approaches to the question of whether they should deregulate their electricity markets. Some states have passed comprehensive deregulation legislation and completely restructured. Some have avoided it entirely, while others have introduced some elements of deregulation into their markets. Over the last several years, 18 states have undertaken some form of deregulation or retail open access, while 32 others have elected not to deregulate after studying and debating restructuring initiatives (see Figure 8 for details).

- **Ring-Fencing Provisions**

State commissions sometimes attempt to insulate and protect regulated operating utilities from the often riskier activities of their parent companies or unregulated subsidiaries. Some so-called "ring-fencing" provisions that have been adopted at the state level include: dividend limitations, minimum equity requirements, limits on unregulated activities, credit rating requirements, the maintenance of collateral, limitations on intercompany transactions, and restrictions on asset sales.

- **Transition Periods and Rate Caps**

Some utilities are subject to price limitations or rate freezes which were put in place as states implemented transition plans to deregulate their electric markets. These rates were often thought to be adequate to permit the utilities to both recover stranded costs and earn an adequate rate of return until a fully competitive environment developed. Many of these transition periods and associated rate caps are now ending without a fully competitive market having developed, and the likelihood that these transition periods will be extended is an important credit consideration.

- **Cost Recovery Provisions**

States have various policies with respect to fuel and wholesale power cost recovery, and the recent volatility in commodity prices have made these provisions important elements of a utility's cost management capability. Such provisions make it possible for utilities to quickly adjust rates in the event of an unexpected hike in fuel costs. Although the number of states permitting such recovery has declined, particularly in those that have transitioned to a competitive market, they remain critical risk mitigants to those utilities still operating in regulated environments.

- **Incentive- or Performance-Based Rates (Earnings Sharing)**

Utilities in the US have traditionally operated under "cost of service"-based rates under which revenues were set to permit the utility to cover its costs and provide for an acceptable rate of return. However, a number of state regulatory commissions have implemented incentive- or performance-based rates which give utilities incentives to operate better and more efficiently. Often, these incentives take the form of an earnings sharing mechanism, allowing a utility to keep some of the profits earned above a predetermined range, while returning any excess to ratepayers.

Figure 8 – Regulatory Characteristics of States in The U.S.

State	Deregulation	Rate Cap	Cost Recovery	Earnings Sharing
Alabama			X	X
Alaska	N/A	N/A	N/A	N/A
Arizona	X	X	X	
Arkansas			X	
California	X		X	X
Colorado			X	X
Connecticut	X	X	X	X
Delaware	X	X	X	
DC	X	X		
Florida			X	X
Georgia			X	X
Hawaii			X	
Idaho			X	
Illinois	X	X	X	X
Indiana			X	X
Iowa			X	
Kansas			X	
Kentucky			X	
Louisiana			X	
Maine	X		X	
Maryland	X	X		
Massachusetts	X		X	X
Michigan	X	X	X	
Minnesota			X	
Mississippi			X	X
Missouri				X
Montana				
Nebraska	N/A	N/A	N/A	N/A
Nevada			X	
New Hampshire	X	X	X	
New Jersey	X		X	
New Mexico		X		
New York	X		X	X
North Carolina			X	
North Dakota			X	X
Ohio	X	X		
Oklahoma			X	
Oregon			X	
Pennsylvania	X	X		
Rhode Island	X		X	
South Carolina			X	
South Dakota			X	
Tennessee			X	
Texas	X		X	
Utah				
Vermont				
Virginia	X	X		
Washington			X	
West Virginia			X	
Wisconsin			X	
Wyoming			X	

Source: Moody's, Regulatory Research Associates.

APPENDICES

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
EUROPE									
Landsvirkjun	Iceland	Aaa	0.2	28.2	2.7	6.7	6.4	67.7	68.2
EVN	Austria	Aa3	1.1	11.9	10.3	30.0	26.2	111.8	43.6
Fingrid	Finland	Aa3	0.3	33.9	2.6	8.1	7.5	165.2	78.4
Electricite de France	France	Aa3	45.4	13.4	4.3	20.1	16.9	93.6	64.2
E.on	Germany	Aa3	41.1	12.1	4.7	13.7	9.6	76.2	37.4
Terna	Italy	Aa3	1.2	50.8	3.8	17.7	15.7	43.9	50.0
Statnett	Norway	Aa3	0.5	30.8	3.1	15.6	9.7	92.3	57.6
Scottish & Southern Energy	UK	Aa3	7.2	15.4	8.5	38.6	20.7	94.9	45.3
			hi	50.8	10.3	38.6	26.2	165.2	78.4
			avg	24.1	5.3	20.6	15.2	96.9	53.8
			med	15.4	4.3	17.7	15.7	93.6	50.0
			low	11.9	2.6	8.1	7.5	43.9	37.4
Verbund	Austria	A1	2.3	21.9	2.1	8.7	7.6	311.4	74.4
RWE	Germany	A1	42.0	11.5	3.6	15.8	13.6	58.3	40.3
ENEL	Italy	A1	38.1	15.1	5.0	21.9	14.7	69.1	53.3
			hi	21.9	5.0	21.9	14.7	311.4	74.4
			avg	16.2	3.6	15.5	12.0	146.3	56.0
			med	15.1	3.6	15.8	13.6	69.1	53.3
			low	11.5	2.1	8.7	7.6	58.3	40.3
Suez	France	A2	45.2	9.3	2.3	12.0	7.8	42.0	68.8
EWE	Germany	A2	2.9	7.3	22.4	77.5	69.4	100.8	42.9
Essent	Netherlands	A2	8.8	10.4	5.6	28.4	25.5	152.5	61.3
Nuon	Netherlands	A2	4.7	9.4	7.0	28.6	25.2	93.9	40.8
Red Electrica de Espana	Spain	A2	0.5	36.6	8.2	25.2	18.1	37.0	56.9
Iberdrola	Spain	A2	7.0	18.7	3.3	14.4	9.9	72.3	57.9
National Grid Company	UK	A2	2.5	0.4	4.0	0.2	0.1	1.2	0.6
United Utilities Electricity	UK	A2	0.5	53.6	4.5	22.2	14.4	75.8	52.4
			hi	53.6	22.4	77.5	69.4	152.5	68.8
			avg	18.2	7.2	26.1	21.3	71.9	47.7
			med	9.9	5.0	23.7	16.3	74.0	54.6
			low	0.4	2.3	0.2	0.1	1.2	0.6
Eesti Energia	Estonia	A3	0.3	12.6	10.9	49.6	49.6	71.2	23.3
Energie Baden-Wuerttemberg (EnBW)	Germany	A3	9.7	6.9	2.3	5.8	3.6	21.9	80.3
Electricidade de Portugal	Portugal	A3	8.7	11.8	3.6	10.8	7.3	65.2	58.3
Endesa	Spain	A3	21.0	19.4	3.3	12.7	9.2	-971.8	66.6
Vattenfall	Sweden	A3	13.6	16.5	4.0	15.6	14.0	84.1	53.9
			hi	19.4	10.9	49.6	49.6	84.1	80.3
			avg	13.4	4.8	18.9	16.7	-145.9	56.5
			med	12.6	3.6	12.7	9.2	65.2	58.3
			low	6.9	2.3	5.8	3.6	-971.8	23.3

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
CEZ	Czech Republic	Baa1	2.2	18.7	8.4	50.0	45.6	145.7	21.8
Public Power Corp (PPC)	Greece	Baa1	3.5	19.6	4.9	15.8	14.4	101.6	69.3
Latvenergo	Latvia	Baa1	0.3	11.8	14.6	63.2	59.0	63.0	25.3
Eskom	South Africa	Baa1/A3	3.5	37.3	3.4	24.2	23.8	202.7	53.2
Scottish Power plc	UK	Baa1	9.3	19.5	3.8	16.2	8.7	30.6	56.6
			hi	37.3	14.6	63.2	59.0	202.7	69.3
			avg	21.4	7.0	33.9	30.3	108.7	45.2
			med	19.5	4.9	24.2	23.8	101.6	53.2
			low	11.8	3.4	15.8	8.7	30.6	21.8
Israel Electric Corporation (IEC)	Israel	Baa2	2.6	17.3	2.2	7.5	7.4	65.1	69.9
Union Fenosa	Spain	Baa2	5.6	15.7	2.1	4.4	2.3	54.8	65.1
WPD Holdings UK	UK	Baa3	0.5	47.7	2.4	9.1	6.7	50.0	68.3
CE Electric	UK	Baa3	1.1	36.8	2.6	10.5	8.1	-1.1	75.0
			hi	47.7	2.6	10.5	8.1	65.1	75.0
			avg	29.4	2.3	7.9	6.1	42.2	69.6
			med	27.0	2.3	8.3	7.1	52.4	69.1
			low	15.7	2.1	4.4	2.3	-1.1	65.1
Transelectrica	Romania	Ba3	0.2	-1.4	7.3	77.1	76.4	122.6	10.1
			hi	-1.4	7.3	77.1	76.4	122.6	10.1
			avg	-1.4	7.3	77.1	76.4	122.6	10.1
			med	-1.4	7.3	77.1	76.4	122.6	10.1
			low	-1.4	7.3	77.1	76.4	122.6	10.1
ASIA/PACIFIC									
Singapore Power	Singapore	Aa1	2.6	26.0	7.0	32.0	-8.0	-362.0	48.0
SP PowerAssets		Aa1	0.4	44.0	6.0	8.0	8.0	625.0	61.0
			hi	44.0	7.0	32.0	8.0	625.0	61.0
			avg	35.0	6.5	20.0	0.0	131.5	54.5
			med	35.0	6.5	20.0	0.0	131.5	54.5
			low	26.0	6.0	8.0	-8.0	-362.0	48.0
CLP Holdings		A1	3.4	35.0	14.0	22.0	49.0	94.0	20.0
			hi	35.0	14.0	22.0	49.0	94.0	20.0
			avg	35.0	14.0	22.0	49.0	94.0	20.0
			med	35.0	14.0	22.0	49.0	94.0	20.0
			low	35.0	14.0	22.0	49.0	94.0	20.0
Australian Gas Light Company	Australia	A2	3.8	13.0	4.1	23.0	14.0	96.0	49.0
			hi	13.0	4.1	23.0	14.0	96.0	49.0
			avg	13.0	4.1	23.0	14.0	96.0	49.0
			med	13.0	4.1	23.0	14.0	96.0	49.0
			low	13.0	4.1	23.0	14.0	96.0	49.0

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
KEPCO		A3	18.0	24.0	6.0	33.0	31.0	112.0	40.0
Citipower		A3	0.5	39.0	3.0	10.0	7.0	132.0	88.0
ETSA		A3	0.7	42.0	2.0	4.0	-2.0	69.0	64.0
Powercor		A3	0.6	42.0	4.0	12.0	12.0	111.0	51.0
SPI Powernet		A3	0.3	62.0	2.0	10.0	10.0	258.0	71.0
TXU Australia		A3		24.0	3.0	10.0	8.0	171.0	57.0
			hi	62.0	6.0	33.0	31.0	258.0	88.0
			avg	38.8	3.3	13.2	11.0	142.2	61.8
			med	40.5	3.0	10.0	9.0	122.0	60.5
			low	24.0	2.0	4.0	-2.0	69.0	40.0
United Energy		Baa1	0.4	32.0	3.0	13.0	7.0	71.0	60.0
Vector		Baa1	0.5	39.0	3.0	8.0	5.0	117.0	67.0
Electranet		Baa1	0.1	46.0	2.0	3.0	3.0	151.0	74.0
Gasnet		Baa1	0.1	61.0	2.0	6.0	4.0	687.0	68.0
			hi	61.0	3.0	13.0	7.0	687.0	74.0
			avg	44.5	2.5	7.5	4.8	256.5	67.3
			med	42.5	2.5	7.0	4.5	134.0	67.5
			low	32.0	2.0	3.0	3.0	71.0	60.0
Tenaga		Baa2	4.1	18.0	3.0	11.0	10.0	82.0	61.0
			hi	18.0	3.0	11.0	10.0	82.0	61.0
			avg	18.0	3.0	11.0	10.0	82.0	61.0
			med	18.0	3.0	11.0	10.0	82.0	61.0
			low	18.0	3.0	11.0	10.0	82.0	61.0
National Thermal Power Corporation		Baa3	4.1	20.5	5.5	31.2	25.7	93.8	29.1
			hi	20.5	5.5	31.2	25.7	93.8	29.1
			avg	20.5	5.5	31.2	25.7	93.8	29.1
			med	20.5	5.5	31.2	25.7	93.8	29.1
			low	20.5	5.5	31.2	25.7	93.8	29.1
Tata Power		Ba1	1.1	17.9	3.6	28.6	25.1	133.3	42.7
			hi	17.9	3.6	28.6	25.1	133.3	42.7
			avg	17.9	3.6	28.6	25.1	133.3	42.7
			med	17.9	3.6	28.6	25.1	133.3	42.7
			low	17.9	3.6	28.6	25.1	133.3	42.7
National Power Corporation		B1	2.1	29.7	2.1	3.6	1.9	129.0	94.5
			hi	29.7	2.1	3.6	1.9	129.0	94.5
			avg	29.7	2.1	3.6	1.9	129.0	94.5
			med	29.7	2.1	3.6	1.9	129.0	94.5
			low	29.7	2.1	3.6	1.9	129.0	94.5

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
AMERICAS									
WPS Resources Corp	USA	A1	2.4	9.1	4.1	18.4	11.9	51.1	51.7
			hi	9.1	4.1	18.4	11.9	51.1	51.7
			avg	9.1	4.1	18.4	11.9	51.1	51.7
			med	9.1	4.1	18.4	11.9	51.1	51.7
			low	9.1	4.1	18.4	11.9	51.1	51.7
Consolidated Edison Inc	USA	A2	9.2	16.7	4.1	20.3	14.0	80.3	45.3
FPL Group, Inc.	USA	A2	8.7	17.0	6.0	29.0	23.0	57.0	47.0
Hydro One, Inc	CAN	A2	3.3	25.1	3.0	13.0	9.3	83.3	60.3
NSTAR	USA	A2	2.9	16.0	3.5	16.7	12.8	127.0	52.7
Otter Tail Corporation	USA	A2	0.7	13.3	4.3	17.6	11.9	84.9	53.0
			hi	25.1	6.0	29.0	23.0	127.0	60.3
			avg	17.6	4.2	19.3	14.2	86.5	51.7
			med	16.7	4.1	17.6	12.8	83.3	52.7
			low	13.3	3.0	13.0	9.3	57.0	45.3
Ameren Corporation	USA	A3	4.1	24.3	5.0	19.5	11.1	51.2	44.0
Scana Corporation	USA	A3	3.3	18.3	3.1	13.2	9.7	99.3	54.3
Southern Company (The)	USA	A3	10.7	24.3	4.7	19.7	12.3	67.0	50.0
Wisconsin Energy Corp	USA	A3	3.9	18.1	3.8	15.3	13.1	124.1	60.1
			hi	24.3	5.0	19.7	13.1	124.1	60.1
			avg	21.3	4.2	16.9	11.6	85.4	52.1
			med	21.3	4.2	17.4	11.7	83.2	52.2
			low	18.1	3.1	13.2	9.7	51.2	44.0
Constellation Energy	USA	Baa1	6.1	18.7	3.7	16.3	14.0	135.0	52.0
Dominion Resources	USA	Baa1	11.0	23.0	3.3	14.4	10.3	45.7	54.3
Duke Energy Corp	USA	Baa1	18.7	15.0	3.4	17.3	12.7	166.0	49.3
OGE Energy Corp.	USA	Baa1	3.3	9.2	3.9	16.5	11.4	117.6	53.0
Sempra Energy	USA	Baa1	7.2	15.1	4.0	18.6	18.1	76.3	56.3
Xcel Energy Inc.	USA	Baa1	7.9	15.8	4.6	18.8	14.0	114.3	61.6
			hi	23.0	4.6	18.8	18.1	166.0	61.6
			avg	16.1	3.8	17.0	13.4	109.1	54.4
			med	15.4	3.8	16.9	13.3	116.0	53.7
			low	9.2	3.3	14.4	10.3	45.7	49.3

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
Cinergy Corp	USA	Baa2	4.1	22.3	4.2	14.4	9.5	55.8	56.3
DTE Energy Company	USA	Baa2	6.5	24.0	2.8	11.0	7.5	NM	58.0
Emera Inc.	CAN	Baa2	1.0	27.8	2.7	10.5	7.0	151.7	64.9
Empire District Electric Company	USA	Baa2	0.3	21.0	3.0	15.0	8.0	51.0	51.0
Energy East Corporation	USA	Baa2	4.1	16.0	2.6	11.1	8.3	127.0	58.0
Exelon Corp	USA	Baa2	15.2	25.8	4.4	24.7	14.0	86.1	39.9
Great Plains Energy Inc.	USA	Baa2	1.8	16.9	4.3	17.4	11.9	139.1	56.6
IDACORP, Inc.	USA	Baa2	1.0	14.3	4.3	19.7	14.0	98.7	44.0
Northeast Utilities	USA	Baa2	5.7	18.1	2.9	11.0	9.6	124.7	42.9
Pepco Holdings, Inc.	USA	Baa2	5.8	12.5	3.3	10.8	8.4	136.2	56.5
Pinnacle West Capital Corp.	USA	Baa2	2.6	21.7	4.8	18.8	15.3	81.2	50.8
Progress Energy	USA	Baa2	8.3	15.1	3.4	14.4	10.1	68.6	59.1
Public Service Enterprise Group Inc.	USA	Baa2	8.7	23.7	2.4	10.0	6.3	52.7	59.0
			hi	27.8	4.8	24.7	15.3	151.7	64.9
			avg	19.9	3.5	14.5	10.0	97.7	53.6
			med	21.0	3.3	14.4	9.5	92.4	56.5
			low	12.5	2.4	10.0	6.3	51.0	39.9
American Electric Power Co	USA	Baa3	13.5	19.6	3.4	13.2	9.0	208.0	58.5
Cleco Corp	USA	Baa3	0.8	22.0	3.4	16.0	12.0	132.3	57.0
Duquesne Light Holdings	USA	Baa3	1.0	16.9	3.9	18.9	13.4	428.4	54.4
Edison International	USA	(P)Baa3	11.6	33.6	3.0	17.7	17.6	NM	59.8
Entergy Corporation	USA	Baa3	9.0	19.0	4.1	21.1	18.0	100.4	41.3
FirstEnergy Corp.	USA	Baa3	10.8	18.1	3.0	10.9	8.3	108.6	60.1
MidAmerican Energy Holding Co.	USA	Baa3	5.1	25.1	2.2	8.6	8.6	128.4	75.7
PG&E Corporation	USA	Baa3	10.4	28.7	2.9	14.4	14.3	142.4	76.4
PNM Resources, Inc.	USA	Baa3	1.6	11.4	4.4	17.4	14.8	83.0	52.5
PPL Corporation *	USA	Baa3	5.4	21.6	2.5	13.6	11.1	104.5	67.1
UIL Holdings Corporation	USA	Baa3	1.0	12.3	4.0	16.0	10.3	100.7	50.3
** Rating on guaranteed debt issued by PPL Capital*									
			hi	33.6	4.4	21.1	18.0	428.4	76.4
			avg	20.8	3.3	15.3	12.5	153.7	59.4
			med	19.6	3.4	16.0	12.0	118.5	58.5
			low	11.4	2.2	8.6	8.3	83.0	41.3
Avista Corp	USA	Ba1	1.2	15.7	2.3	10.0	8.7	128.0	54.3
Empresa Nacional de Electricidad S.A.	Chile	Ba1	1.5	35.3	2.1	8.2	6.3	217.7	56.0
Enersis S.A.	Chile	Ba1	4.0	17.7	2.3	11.5	9.3	207.0	76.0
Puget Energy, Inc.	USA	Ba1	2.6	15.0	2.8	13.3	10.0	94.7	56.3
TXU Corp	USA	Ba1	10.3	17.0	2.9	13.0	10.0	160.3	62.0
Westar Energy	USA	Ba1	1.4	26.2	2.1	8.9	7.0	93.1	60.7
			hi	35.3	2.9	13.3	10.0	217.7	76.0
			avg	21.1	2.4	10.8	8.5	150.1	60.9
			med	17.3	2.3	10.8	9.0	144.2	58.5
			low	15.0	2.1	8.2	6.3	93.1	54.3

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Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
Centerpoint Energy, Inc.	USA	Ba2	9.4	17.0	2.4	9.7	7.0	90.0	65.0
DPL Inc.	USA	Ba2	1.2	35.8	2.6	12.6	8.1	107.2	67.0
TECO Energy	USA	Ba2	2.6	8.8	2.7	11.0	5.6	24.3	59.4
			hi	35.8	2.7	12.6	8.1	107.2	67.0
			avg	20.5	2.6	11.1	6.9	73.8	63.8
			med	17.0	2.6	11.0	7.0	90.0	65.0
			low	8.8	2.4	9.7	5.6	24.3	59.4
COELCE	Brazil	Ba3	0.3	22.3	6.3	43.5	28.9	113.3	35.8
			hi	22.3	6.3	43.5	28.9	113.3	35.8
			avg	22.3	6.3	43.5	28.9	113.3	35.8
			med	22.3	6.3	43.5	28.9	113.3	35.8
			low	22.3	6.3	43.5	28.9	113.3	35.8
Allegheny Energy Inc.	USA	B1	2.2	2.4	1.9	6.2	4.1	40.6	62.0
CEMIG	Brazil	B1	1.8	16.8	2.4	15.7	11.8	66.7	43.9
CMS Energy Company	USA	B1	7.4	6.5	1.8	5.2	5.2	-46.8	84.0
			hi	16.8	2.4	15.7	11.8	66.7	84.0
			avg	8.6	2.0	9.0	7.0	20.2	63.3
			med	6.5	1.9	6.2	5.2	40.6	62.0
			low	2.4	1.8	5.2	4.1	-46.8	43.9
Sierra Pacific Resources	USA	B2	3.5	5.2	-0.1	-6.3	-7.0	NM	64.7
			hi	5.2	-0.1	-6.3	-7.0	NM	64.7
			avg	5.2	-0.1	-6.3	-7.0	NM	64.7
			med	5.2	-0.1	-6.3	-7.0	NM	64.7
			low	5.2	-0.1	-6.3	-7.0	NM	64.7
EDELNOR	Chile	B3	0.1	6.0	1.8	3.0	3.0	343.6	49.1
			hi	6.0	1.8	3.0	3.0	343.6	49.1
			avg	6.0	1.8	3.0	3.0	343.6	49.1
			med	6.0	1.8	3.0	3.0	343.6	49.1
			low	6.0	1.8	3.0	3.0	343.6	49.1

Note: The listed U.S. issuers are all holding company parent entities. Almost all have regulated operating utility subsidiaries that have higher ratings.

Appendix 1 – Three Year Average Ratios and Current Ratings

Company name	Country	Rating	Revenues $bn equiv	EBITA margin %	FFO interest times coverage	FFO/TD %	RCF/TD %	RCF/ Capex %	TD/ Capitalization %
JAPAN									
Tokyo Electric Power Company, Inc.	Japan	Aa3	46.6	13.1	6.0	15.8	12.3	150.3	92.7
Chubu Electric Power Company, Inc.	Japan	Aa3	20.2	14.5	5.4	17.4	13.5	153.9	81.7
Kansai Electric Power Co., Inc.	Japan	Aa3	24.4	13.5	7.1	19.3	15.4	156.7	77.9
			hi	14.5	7.1	19.3	15.4	156.7	92.7
			avg	13.7	6.2	17.5	13.8	153.7	84.1
			med	13.5	6.0	17.4	13.5	153.9	81.7
			low	13.1	5.4	15.8	12.3	150.3	77.9
Hokuriku Electric Power Co., Inc.	Japan	A1	4.3	15.2	4.8	15.1	13.0	128.1	85.5
Chugoku Electric Power Co., Inc.	Japan	A1	9.3	12.9	5.5	15.9	11.6	167.3	80.7
Tohoku Electric Power Company, Inc.	Japan	A1	15.0	13.1	5.4	18.2	14.0	142.3	80.6
Shikoku Electric Power Company, Inc.	Japan	A1	5.4	13.3	6.6	21.0	17.4	199.7	76.0
Kyushu Electric Power Company, Inc.	Japan	A1	13.4	13.7	6.0	18.2	16.2	154.8	81.6
Hokkaido Electric Power Co., Inc.	Japan	A1	5.0	15.5	5.9	20.3	16.3	137.0	72.1
			hi	15.5	6.6	21.0	17.4	199.7	85.5
			avg	13.9	5.7	18.1	14.7	154.9	79.4
			med	13.5	5.7	18.2	15.1	148.5	80.7
			low	12.9	4.8	15.1	11.6	128.1	72.1

Appendix 2 – Definition of Ratios

FFO Interest cover

(Cash Flow from Operations – Changes in Working Capital + Interest Expense) / (Interest Expense + Capitalized Interest Expense)

FFO / Adjusted gross debt

(Cash Flow from Operations – Changes in Working Capital) / (Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items)

Retained Cash Flow / Adjusted gross debt

(Cash Flow from Operations – Changes in Working Capital – Common and Preferred Dividends) / (Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items)

Adjusted gross debt / Regulated Asset Value or Capitalization

(Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items) / RAV or (Shareholders' equity + minority interest + deferred taxes + goodwill write-off reserve + Total debt + operating lease adjustment + under-funded pension liabilities + basket-adjusted hybrids + securitizations + guarantees + other debt-like items)

EBITA / Sales (margin)

(Net operating income + Equity Earnings of Affiliates + Income from Financial Asset Investments + Goodwill amortization + Interest Component of Operating Lease (1/3 of Rent) + Interest Income – Other expense) / Total revenues

Retained Cash Flow / Capex

(Cash Flow from Operations – Changes in Working Capital – Common and Preferred Dividends) / (Capex + Acquisitions – Divestitures)

Appendix 3 – Description of Utilities Bond Default History

Electric utilities have historically enjoyed a relatively strong credit quality thanks to their stable and predictable cash flows and the tendency of regulators to be supportive when a utility experiences financial stress. Over the past 70 years (since the Great Depression), only five rated investor-owned utilities have experienced bond defaults in highly developed countries; these were all US-domiciled issuers:

1988 Public Service Company of New Hampshire (bankruptcy)

1992 El Paso Electric (bankruptcy)

2001 Pacific Gas & Electric Company (bankruptcy)

2001 Southern California Edison Company (payment default)

2003 Northwestern Corporation (bankruptcy)

Two principal factors contributed to these defaults. In four of the five defaults, a state regulatory commission failed to provide sufficient and timely rate relief for recovery of costs or capital investment in utility plant. This reflected regulatory commission concerns about the impact of large rate increases on customers, as well as debate about the appropriateness of the regulatory relief being sought by the utility. In two of these four cases, transition towards deregulation of the electricity market was a key contributing factor in that it exposed the utilities to dramatic increases in wholesale market prices for purchased power. These two California utilities also lacked long-term contracts such as PPAs, leaving them highly exposed to sharp spikes in market prices. In the remaining case, the default resulted from a failed diversification into unregulated businesses that were totally unrelated to the basic utility business.

These defaults resulted in an average recovery for bondholders that is well above the average for corporate bonds. Holders of secured debt recovered 100% of principal and interest in all five cases. In the case of Pacific Gas & Electric and Southern California Edison Company, 100% of all debt holder claims were ultimately paid.

Figure 9 below lists each of the five bond defaults within the sector and categorizes the reasons for the defaults as the "Principal Factor" or a "Contributing Factor".

Figure 9 – Bond Defaults of US Investor-Owned Utilities: Principal and Contributing Factors

Issuer	Regulators/ Legislators Failed to Respond on a Timely Basis	Transition from a Regulated Environment to a Unregulated Marketplace	Poor-Performing Unregulated Investments
Public Service Company of New Hampshire	Principal Factor		
El Paso Electric Company	Principal Factor		Contributing Factor
Pacific Gas and Electric Company	Principal Factor	Principal Factor	
Southern California Edison Company	Principal Factor	Principal Factor	
Northwestern Corporation			Principal Factor

LESSONS FROM THE ELECTRIC UTILITY INDUSTRY'S DEFAULT HISTORY

Among rated utilities in developed countries, only US utilities have experienced defaults in the last 70 years. In addition to the five US defaulting utilities, several US utilities have narrowly avoided default. In 2002, Allegheny Energy and Centerpoint Energy each experienced a serious liquidity crisis and only avoided defaulting on debt payments due to last-minute agreements with bank lenders that allowed all payments to be made on a timely basis. The greater historic tendency for US companies to default is consistent with Moody's view that regulatory risk is greater in the US than in a number of other highly developed countries.

Related Research

Rating Methodology:

The Analysis of Off-Balance Sheet Exposures – A Global Perspective, Rating Methodology, July 2004, #87408

Off-Balance Sheet Leases: Capitalization and Ratings Implications, October 1999, #48591

Industrial Company Rating Methodology, July 1998, #36188

Special Comment:

Moody's Liquidity Risk Assessments – Q&A, March 2002, #74571

Moody's Analysis of US Corporate Rating Triggers Heightens the Need for Increased Disclosure, July 2002, #75412

Rating Triggers in Europe: Limited Awareness but Widely Used Among Corporate Issuers, September 2002, #76199

U.S. and Canadian Corporate Governance Assessment, August 2003, #78666

Moody's Findings on Corporate Governance in the United States and Canada: August 2003 - September 2004, October 2004, #89113

Event Risk's Four Horsemen of the Apocalypse: Decapitalization, Cash-financed M&A, Litigation, and Accounting Irregularities, November 2000, #61838

Event Risk For European Corporates 2003 – Still A Credit Risk, Still Part Of Our Analysis, February 2003, #77436

The Analysis Of Off-Balance Sheet Exposures: a Global Perspective, July 2004, #87408

The Incorporation of Joint-Default Analysis into Moody's Corporate, Financial and Government Rating Methodologies, February 2005, #91617

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Report Number: 91730

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Moody's Global Infrastructure

Industry Outlook

January 2009

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U.S. Investor-Owned Electric Utilities

The outlook for the U.S. investor-owned electric utility sector is stable. This outlook expresses Moody's expectations for the fundamental credit conditions in the industry over the next 12 to 18 months.

- Fundamentals expected to remain intact near-term, but concerns over rising business and operating risks may stress credit profile longer term.
- State regulators continue to grant timely recovery of prudently incurred operating costs and capital expenditures with a reasonable rate of return.
- Key financial credit metrics likely to deteriorate modestly over next 12 to 18 months – not a big concern today. Companies have adequate time to begin financial strengthening program to fortify position within given rating category.
- Key challenges that need to be addressed include:
  - **Potential for significant environmental legislation,** including carbon emissions, represents a material "wild card" due to uncertain costs, framework and implementation timeframe.
  - **Sizeable infrastructure investment plans** include all facets of the traditional, vertically-integrated rate base. Deferrals and delays are temporary solutions.
  - **Regulatory overhang** concerns over the pace and amount of financial relief could agitate consumer tolerance to absorb steadily increasing rates, especially in a protracted/severe recession.
  - **Protracted economic pressures** may increase intensity of business and operating risks.
- Near-term liquidity profiles appear adequate at this time, but maintaining unfettered access to capital markets will be critical.
- Credit facility expirations loom, posing a significant and material concern if markets do not improve.
  - **Major financial institutions exiting commodity markets** represent an intermediate-term risk, as contract expirations occur amid higher capital costs and managing hedging activity becomes more challenging.
- Issuers' different approaches to future uncertainties will be set by "tone at the top" — missed opportunities to issue equity over last several years may prove to be unexpectedly costly for some.

U.S. Investor-Owned Electric Utilities

Overview

The U.S. investor-owned electric utility sector enjoys solid credit metrics and the fundamental credit outlook remains stable. In general, state regulators continue to let the utilities recover prudently incurred operating costs and capital expenditures relatively quickly, and with reasonable rates of return. Moreover, we believe state regulators would otherwise prefer to regulate financially healthy companies.

The sector is also well positioned relative to many other corporate/industrial sectors, primarily due to the fundamental business plan: providing monopolistic electric service within a designated service territory in exchange for oversight and limitations on profitability. However, we are increasingly concerned with business and operating risks, which are not new but appear to be accelerating faster than previously understood. These business and operating risks include potential environmental legislation from the Obama Administration; the continued capital investment needs for refurbishing aging infrastructure; and a potentially more contentious regulatory relationship amid a protracted or severe recession.

Although liquidity appears to be reasonable today, the sector's substantial negative free cash flow generation creates a need for unfettered access to the capital markets. This represents a fundamental weakness to the sector's business plan.

Our concerns are clearly growing, but we believe utilities have adequate time to adjust and revise their corporate finance policies and strengthen balance sheets, thereby improving their ability to manage volatility and address uncertainty. Individual issuers can strengthen their balance sheets through various means, but we continue to believe that the most effective and efficient method is a large infusion of new common equity. To date, we have seen only a modest amount of proactive new equity issuances, but the industry has begun showing a noticeable openness toward issuing new equity.

Table 1: Selected industry sector comparison[1]

	CFO/Debt			RCF/Debt			Debt/EBITDA		
Sector Averages	**2007**	**LTM 3Q08**	**5-year average (2003-2007)**	**2007**	**LTM 3Q08**	**5-year average (2003-2007)**	**2007**	**LTM 3Q08**	**5-year average (2003-2007)**
US Investor Owned Utility (IOU) Holding Companies	17%	15%	17%	14%	14%	14%	4.1	4.2	4.3
US IOU Integrated Utilities	22%	20%	23%	17%	18%	17%	3.4	3.7	3.4
US IOU T&D Utilities	15%	19%	18%	13%	15%	14%	3.6	3.8	3.8
North American Gas Distribution	18%	17%	17%	14%	13%	15%	3.8	3.2	4.0
North American Gas Diversified	23%	22%	20%	17%	19%	16%	3.7	3.7	3.6
North American Gas Pipelines	22%	17%	23%	16%	10%	16%	4.6	3.1	3.6
Oil/Gas Independent Exploration & Production	87%	86%	366%	76%	81%	240%	nm	nm	11.6
Oil/Gas Integrated	90%	94%	81%	75%	70%	69%	0.9	0.8	1.2
Global Coal	27%	34%	30%	23%	30%	27%	5.7	7.3	3.8

Source: Moody's Financial Metrics.

[1] The individual companies that comprise the industry sector peers groups can be found in their respective Rating Methodology reports.

U.S. Investor-Owned Electric Utilities

Key Trends and Rating Implications

Sector well-positioned to cope with recessionary pressures

Electric utilities, like many infrastructure-based businesses, are considered resistant (though not immune) to the current economic and financial market conditions, and the risks of a protracted or severe recession. From a credit perspective, electric utilities are better positioned than many other corporate/industrial sectors. Utilities produce relatively stable and predictable revenues, earnings and cash flows, which are not expected to decline significantly despite recessionary pressures. The sector is capitalized at roughly 55% debt and 45% equity. Near-term liquidity profiles appear adequate at this time and the option of raising external capital remains viable, albeit at higher costs.

Table 2: Top 10 Negative Sectors Globally (as of third quarter 2008)

Industry	Negative Outlook and Rating Under Review for Possible Downgrade Third-Quarter 2008	Negative Outlook and Rating Under Review for Possible Downgrade Fourth-Quarter 2007
Airlines	65%	8%
House building	58%	40%
Newspapers	57%	24%
Restaurants	53%	29%
Gaming	46%	20%
Building Materials	45%	25%
Apparel	43%	23%
Trucking	41%	27%
Consumer Durables	41%	31%
Automobiles	38%	11%

Modest declines expected in key credit metrics not alarming . . . yet

Over the past few years, the sector produced relatively steady key financial credit metrics, a credit positive. Prospectively, we expect these metrics to decline modestly given the increasing operating costs, infrastructure investment needs, plans to finance negative free cash flows primarily with debt, and emerging concerns that poor economic conditions may hinder regulatory relief.

Nevertheless, the likelihood that the sector might drop below the investment grade rating category appears remote at this time, although downgrades within the broader investment grade rating categories are possible. Even under several downside scenarios, the projected ratio of cash flow from operations (CFO) to total adjusted debt should remain in the mid- to high-teens range (down from approximately 20%) and the ratio of debt to capitalization might rise to roughly 55% to 60% (up from 52%), as seen a few years ago.

Projections demonstrate resiliency of utility business plans

We reviewed the average historical financial statements for about 55 vertically-integrated electric utility companies, analyzing the period from 2002 through the 12 months ended September 2008. We used the resulting average financials to create OpCo—a hypothetical, vertically-integrated electric utility. We then applied numerous assumptions to OpCo to make illustrative financial projections for 2009 through 2013. The projections begin with the actual, as adjusted, financials reported for the 12 months ended September 2008, and reflect Moody's standardized GAAP adjustments.[2]

[2] Moody's Approach to Global Standard Adjustments in the Analysis of Financial Statements for Non-Financial Corporations – Part I (July 2006).

U.S. Investor-Owned Electric Utilities

We begin our demonstration with an assumption that the global economy is entering a protracted period of "healing" with a focus on decreasing leverage. This translates into a slow economic recovery, perhaps sometime in 2010.[3] We project that the sector's volumes will decline by 3% in 2009, remain flat in 2010 and then increase by 1% in 2011 and 2012 and 2% in 2013.

We assume annual rate increases of 5% over the next five years. We also assume 5% annual increases in operating and maintenance (O&M) expenses as well as fuel, purchased power and all tracker expenses. Our model uses a dividend policy of 65% of prior year's net income and assumes that negative free cash flows are financed 80% with debt (at an 8% coupon) and 20% new equity (incremental to any retained earnings).

For our analysis, OpCo's CFO averages 18% of its revenues in 2009 and 2010 and 17% thereafter – a decline that reflects historical trends[4]. We also set OpCo's capital expenditures at 200% of prior year's depreciation expense in 2009; 175% in 2010; 200% in 2011; 225% in 2012; and 250% in 2013.

Table 3: Summary of illustrative projection scenarios

					2013 Projected		
Scenario	Dividend Payout	Negative FCF Debt Financing	Fuel, Purchased Power & Trackers	Annual Rate Increases	Rates (cents/kWh)	CFO/Debt	ROE
Base Case	65%	80%	5%	5%/year	12.2	17%	8.9%
Base A	65%	80%	5%	10% ROE target	12.5	17%	10.0%
Wild B	65%	80%	10%	5%/year	12.2	18%	(0.4%)
Wild C	65%	80%	10%	10% ROE target	13.9	20%	10.0%
Mitigant D	0%	100%	10%	7%/year	13.4	20%	6.7%

Under the Base Case scenario, OpCo maintains relatively steady financial credit metrics, where cash flow from operations (CFO) as a percentage of total debt declines modestly from 20% in 2008 to 17% in 2013; CFO interest coverage declines from 4.7x in 2008 to 3.7x in 2013, and; debt to capitalization increases from 52% in 2008 to 55% in 2013. Gross margins and EBITDA margins remain relatively steady at approximately 50% and 30%, respectively and rates increase from 9.6 cents per kWh to 12.2 cents in 2013. The issue, as we see it, is the ROE (net income/equity) falls to roughly 7% over the next few years before improving to almost 9% by 2013.

Our Base A scenario keeps all of these assumptions except that it factors an annual rate increase necessary to achieve an annual 10% ROE. Again, the resulting financial profile is not overly alarming from a credit perspective, as the ratio of CFO to debt still falls modestly to 17% and the CFO interest coverage ratio falls to 3.7x. The ratio of debt to capitalization increases to almost 54%, not a material increase, while total rates per kWh increase modestly to 12.5 cents (versus 12.2 cents per kWh in the Base Case). We observe that the Base A scenario requires larger rate increases in the front years (9% in 2009 versus 5% in the Base Case) and lower increases in the later years (3% versus 5% in the Base Case).

Several wild cards are floating in the deck

One of our "wild card" scenarios (Wild B) differs from the Base Case in one respect: it assumes OpCo sees annual 10% rises in fuel, purchased power and tracker expenses, rather than 5% increases. While the key financial credit metrics would not decline meaningfully in this scenario as compared to the Base Case[5], the ROE would fall almost to zero by 2012, and would be negative in 2013—a material issue associated with both our assumptions and the mechanics of our model.

[3] Moody's Global Financial Risk Perspectives (December 2008).
[4] CFO is comprised of net income and depreciation (calculated by the forecast model) and "other" – which includes deferred taxes and is a plug between CFO, net income and depreciation.
[5] I.e., CFO/debt falls to 17% and CFO interest coverage falls to 4x.

U.S. Investor-Owned Electric Utilities

Our Wild C scenario is set to produce rate increases that give OpCo an annual ROE of 10% (all other assumptions remaining the same as in the Wild B scenario). Wild C scenario requires significantly higher rate increases than the Base Case's 5% per year annual rise: an 11.6% increase in 2009; 7.6% in 2010; 6.8% in 2011; 7.1% in 2012 and 6.3% in 2013. From a credit perspective, we would question the likelihood of success in achieving these levels of rate increases, especially given current economic conditions.

In the Mitigant D scenario, we continue to assume the 10% annual increase in fuel, purchased power and tracker expenses of the "Wild" scenarios. We further assume that OpCo maintains a steady capital investment policy of 225% of prior years D&A (no delays/no reductions) because of a greater recovery assurance from regulators, resulting in a 7% annual rate increase, every year, over the next five years (instead of 5% per year). In addition, OpCo eliminates its common stock dividend and finances its negative free cash flow with 100% debt.

Under Mitigant D, OpCo maintains relatively robust financial metrics: CFO debt remains above 20%; CFO interest coverage declines to 4.3x; and debt to capitalization stays at 52%. Importantly, ROE's fall to the 7% range – perhaps a reflection of a lower risk profile given the authorized recovery assurances by regulators.

For charts illustrating these five paths and how they affect OpCo's 2009-2013 financials, see Appendix A (page 10).

Rate recovery: Regulators have the last word

We continue to incorporate a view that individual state regulatory authorities will provide reasonably timely recovery of prudently incurred costs and investments. Moreover, we continue to believe that regulators prefer to otherwise regulate financially healthy companies. This relationship often creates a virtuous cycle, where financially healthy utilities have the balance sheet strength and liquidity to assure investment, maintain high levels of reliability and attract economic development. In turn, this tends to facilitate contentment among consumers, legislators and regulators.

Regulation is political by definition. In a protracted economic downturn, we may see regulators or legislators attempt to shield consumers from rate increases more aggressively—possibly through recovery deferrals or some form of new market structure intervention. For example, we believe bad debt expense will increase significantly over the next 12 to 18 months, highlighting the need to maintain adequate amounts of liquidity to manage this risk and potentially testing the regulatory timing mechanisms associated with recovery.

Regulatory lag can (and often will) develop, especially when a utility's cash outflows are materially outpacing its authorized revenue requirements (cash inflows). We remain cautious as to the potential "flaring" of regulatory risk on the sector and believe it is more likely to occur in states that had previously attempted some form of legislatively mandated market restructuring. In our opinion, it can take years before stress is fully resolved between a utility and its regulators/legislators.

Fundamentally, our primary concern is that as total revenue requirements rise, so does the risk of a consumer backlash that could prompt legislative intervention or a more contentious atmosphere between utilities and their regulators.

Riders may not be risk-free

We observe that the sector is moving deliberately towards a more transparent recovery format by introducing numerous cost "trackers" and/or other rate "riders" associated with environmental expenditures, storm recovery, efficiency programs and other renewable energy mandates.

Over the near-term, Moody's views rate riders/trackers as a credit positive. Riders assure up-front recovery and theoretically provide more transparency to the operating costs and margins (if any) associated with various social/legislative initiatives. In addition, riders provide a mechanism for utilities to enter into non-economic business decisions that address certain social mandates, and they appear to be more palatable for managing "headline" risk associated with rate increases (i.e., lots of small increases related to numerous riders are easier for consumers to absorb than the less frequent large base-rate increase). From a credit perspective,

because riders may lower the risk profile of a utility by better assuring near-term recovery, it is conceivable that higher leverage can be utilized without adversely impacting existing ratings.

However, it is unclear, at this time, as to whether these cost riders/trackers may prove to have hidden consequences over the long-term horizon. Riders may be viewed by some regulators as materially lowering the over-all risk profile of a utility, resulting in lower authorized returns on equity and/or rate base. They may also contribute to higher earnings volatility, may pressure future requests for base rate relief, or may lead to future disputes with regulatory authorities over the application or administration of the tracker mechanism.

"Wait and see" is a perilous stance

The new Obama Administration is likely to take a more active stance toward integrating energy and environmental policy than the Bush Administration. Already the Obama Administration's appointments to lead the Department of Energy and Environmental Protection Agency suggest that the electric utility sector may see changes more quickly than we had previously expected, and we are still evaluating how they will affect our ratings and rating outlooks. We also await the appointment of a new chairman for the Federal Energy Regulatory Commission. We expect to be in a position to clarify our views as details and policy agendas emerge.

We believe solid investment-grade utilities will not choose a "wait and see" strategy, but will instead pursue a long-term effort to bolster their balance sheets now and try and reduce the risk of future credit rating downgrades. While details of the new Administration's priorities and environmental legislation remain unknown today, we believe threats to credit quality could outweigh potential benefits and opportunities. Yet so far we see no evidence that utilities are aggressively revising their corporate finance policies accordingly.

The big whammy: Prospects for CO_2 emission legislation

The prospect for new environmental legislation—particularly concerning carbon dioxide—represents the biggest emerging issue for electric utilities, given the volume of carbon dioxide emissions and the unknown form and substance of potential CO_2 legislation.

Today we believe the costs associated with any new CO_2 emissions law would be recovered through rates, either through existing fuel-clause pass-through mechanisms or other incremental rate riders[6]. The framework behind such legislation is still being developed, and is subject to considerable political influence. Numerous advocacy groups (including electric utilities and environmentalists) will have a significant opportunity to influence the drafting of the administrative procedures associated with implementation.

New emission legislation poses a potential near-term credit negative. Although the costs are expected to ultimately be borne by end-use consumers, the potential for regulators to limit other base-rate relief may increase. At a minimum, uncertainty risk will increase before it is resolved.

Need to replace aging infrastructure persists

Despite the numerous recent announcements of capital expenditure reductions, the sector is expected to invest heavily in its rate base and infrastructure over the next several years. However, many of the most expensive projects are long term in nature.

Utilities continue to emphasize that their commitment to making these investments will depend on some form of advanced regulatory support or acknowledgement that the investments will be deemed necessary and prudent — all in an effort to mitigate (not eliminate) back end regulatory disallowance risk.

From a credit perspective, we view pre-approvals and other up-front regulatory support as a material credit positive. In addition, regulatory assurances associated with recovery positions a utility to withstand higher amounts of leverage (and lower key credit metrics) for a given rating category. Nevertheless, since maintaining reliability is a key concern with regulators, the need to invest will not go away.

[6] In many economic circles, this is known as a tax.

Impact of new nuclear generation capacity aspirations[7]

Over the next few years, several companies in the electric utility sector will seriously consider the construction of new nuclear generating capacity—a long-term commitment that could be very costly. The pursuit of new nuclear generation could put significant pressure on the sector's overall capital investment plans. Utilities that pursue these projects will most likely take on a higher business and operating risk profile.

Counterparties depart the commodity trading scene

We believe 2008 served as a wake up call to the industry and that many companies will be reassessing hedging programs and strategies. From a credit perspective, companies that are able to identify and manage commodity risks effectively through dynamic hedging programs generally produce more stable cash flows. Assuming they maintain adequate sources of liquidity, these companies are viewed more favorably than those that do not hedge.

As a result of recent developments in the broad financial sector, a number of large financial institutions have decided to exit the commodity trading markets. Over the past few years, these banks and financial institutions had acted as important market-makers, providing liquidity, capital and term products to utilities seeking to trade around their assets or hedge components of their electric generation volumes. Given the spate of recent counterparty exits, we believe that utilities will have fewer counterparties with which to trade; that bid-ask spreads will widen sharply; and that the terms required at the expiration of purchase power contracts may become more onerous than exist today. Although this scenario has not yet become a major problem for the sector, we believe that the challenges loom around the corner.

Increased pension obligations add to total outstanding debt

We reviewed the 2007 funded status[8] for numerous rated utilities and calculated the estimated under-funding for the projected year-end 2008. Based on our simplified analysis, we estimate that the utility sector will be about $40 billion short for meeting its pension obligations as of year-end 2008. As a result, the sector may be required to contribute about $6.5 billion to its pensions during 2009. This compares to 2007 total contributions, required and voluntary, of $2.7 billion.

From a credit perspective, Moody's treats under-funded pension obligations as a debt equivalent that will weaken near-term financial credit metrics. Still, recent federal legislation may help smooth the industry's cash-contribution obligations. On balance, we do not view the impact of the increased debt and pension contributions as a material credit event at this time.

See Appendix B (page 11) for more details of projected pension obligations, both for the industry and for selected large utilities.

Here comes differentiation—driven by tone at the top

Utility executives' and board members' views of corporate finance policies may be changing. Utilities often claim that protecting and maintaining an investment-grade credit rating is critical for maximizing long-term shareholder value. Yet with significant headwinds facing the utility sector, we have been somewhat perplexed that some companies remain reluctant to consider issuing new common equity—even amid historically unprecedented market valuation multiples.

The opportunity cost from declining to issue new equity at such high levels may prove unexpectedly steep. Prospectively, we believe utilities will finance their sizeable negative free cash flows with a more balanced mix of debt and equity.

[7] For more detailed discussions of new nuclear generation, see Moody's Related Research (Special Comments), page 13.
[8] Based on the 2007 annual reports.

2009 U.S. Public Power Electric Utility Sector Outlook

Economic pressures and climate policy may affect stable outlook

The credit outlook for the U.S. public power electric utility sector will remain stable in 2009. But recessionary pressures and the prospect for more aggressive environmental regulation related to climate change create uncertainty in the outlook. Moody's rates over $100 billion of revenue bond debt from U.S. municipal and government-owned utilities. The sector's credit quality will also remain under pressure from the unsettled credit markets; uncertainty about fuel-price volatility; and the increasing cost of new generation capacity.

Power supply decisions will also be more difficult, with possible increases in renewable energy mandates. Public power retail rates have been rising over the past two years. This has created additional political risk for some utilities that seek to recover higher costs through rate increases as economic pressures cut into demand.

A U.S. recession over the next year could reduce electricity demand. Such a reduction, if not managed well, could create rating pressures for public power electric utilities. Lower demand could weaken debt service coverage margins or liquidity if rates are not raised to compensate. This weakening of financial metrics could lead to rating downgrades. The weakening fiscal health of local governments may also lead utilities to increase general-fund transfers to support a municipality's general finances. Doing so could weaken a utility's balance sheet and bring negative rating pressure.

Despite these uncertainties and pressures, the public power sector's stable outlook rests on its largely monopolistic position as a provider of an essential service, combined with its ability to recover costs through a rate-setting process that is *not subject to regulation*. Additionally, public power utilities have shown good ability to withstand the recent turmoil in credit and fuel markets.

There have been no public power credit rating downgrades associated with the impact of the unsettled credit markets. These utilities have managed their operations well, maintained generally sound finances, and provided reliable service to customers. Strategic efforts to manage changes in environmental regulation have also been undertaken. Moody's expects that this business model and performance record should be reasonably maintained in 2009.

Conclusion

The underlying fundamentals for the U.S. investor-owned electric utility sector remain intact. We foresee no significant changes to regulatory support of authorized recovery mechanisms associated with costs and investment.

Even so, the sector today faces material issues, such as the need to replace and refurbish aging infrastructure; an aging labor force and a growing pension burden; and the potential for new CO_2 emission legislation. These challenges might have a significant impact on overall credit quality for the sector—especially if they materialize more quickly than we are now expecting.

We still believe the sector has ample time to revise, adjust and amend corporate finance policies and long-term corporate strategies ahead of changing market conditions. In our opinion, a differentiation may start to emerge based on the corporate finance policies by which utilities address these challenges—the "tone at the top."

The biggest near-term challenge facing the sector is the need to maintain adequate sources of liquidity. This risk will become more obvious if some fundamental changes hit the sector sooner than expected.

U.S. Investor-Owned Electric Utilities

Over the intermediate term, the biggest challenge will be management's ability to balance a utility's financing needs with its infrastructure investments. A balanced mix of debt, preferred stock and common equity appears a reasonable strategy for companies within a solid, investment-grade sector with over a century of operating experience. Over time it also provides a better balance between the asset side of the balance sheet and the liability and equity side.

For the long term, the biggest risk could come from new environmental legislation. Although such new laws may be introduced sooner rather than later, it could take some time before the details of implementation are fully worked out. But given the sheer magnitude of the implications for the sector, we remain befuddled as to why utilities are not more aggressive with their balance-sheet strengthening programs.

All of these challenges and risks must be managed and addressed through the regulatory framework, which we still view as a fundamental credit positive. We foresee little long-term risk from mismanagement of the increasing social mandates between utilities and their constituents: customers, employees, investors, lenders, regulators and legislators.

U.S. Investor-Owned Electric Utilities

Appendix A: Illustrative projections for OpCo, 2009-2013

OpCo, a hypothetical U.S. investor-owned electric utility, is a composite based on the financial results of about 55 companies (see "Projections demonstrate resiliency of utility business plans," page 3). These charts illustrate our projections of OpCo's 2009-2013 financials, using a base scenario and four others.

Chart A: CFO/Total Adjusted Debt

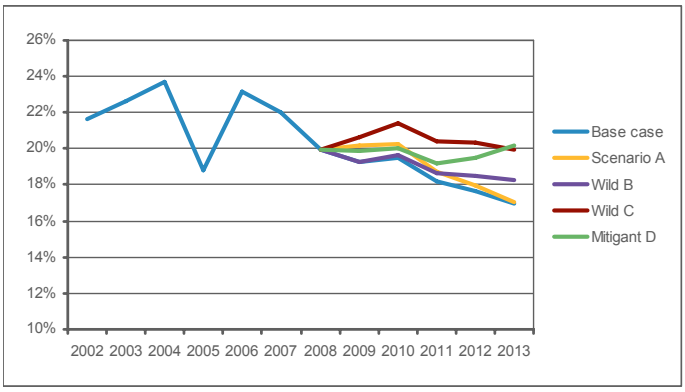


Chart B: Quality of CFO (NIATC+D&A/CFO)

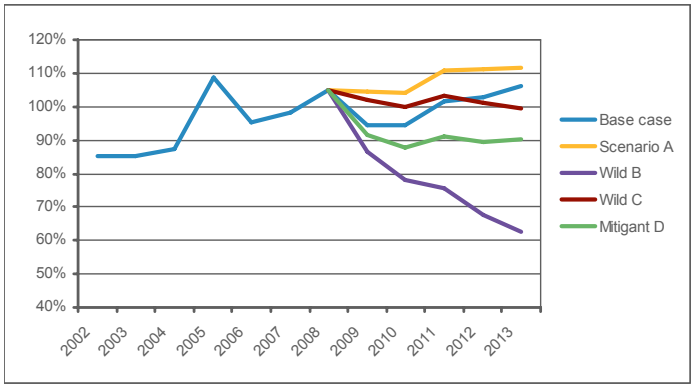


Chart C: Can ROE keep up?

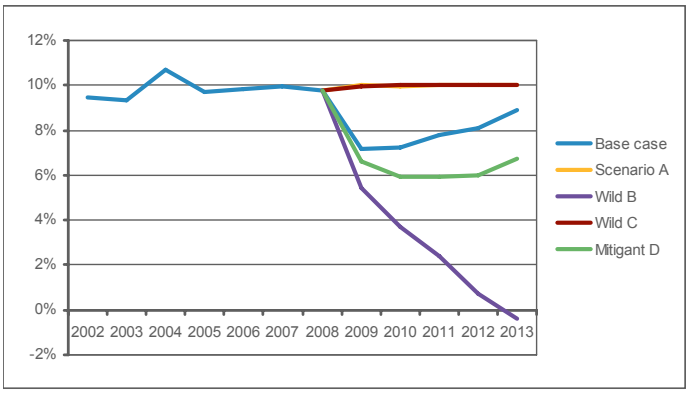


Chart D: Debt/Capitalization

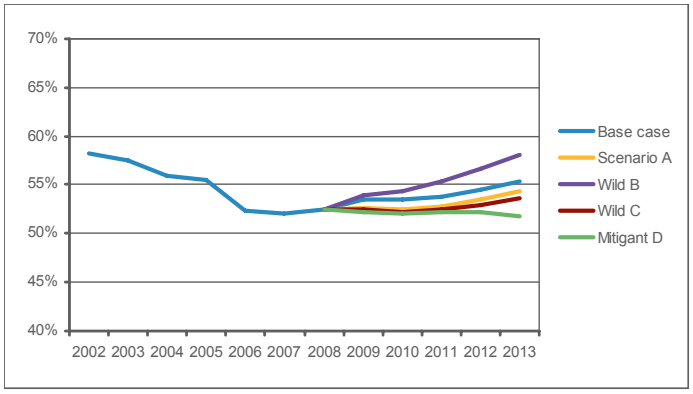


Chart E: CFO Interest Coverage

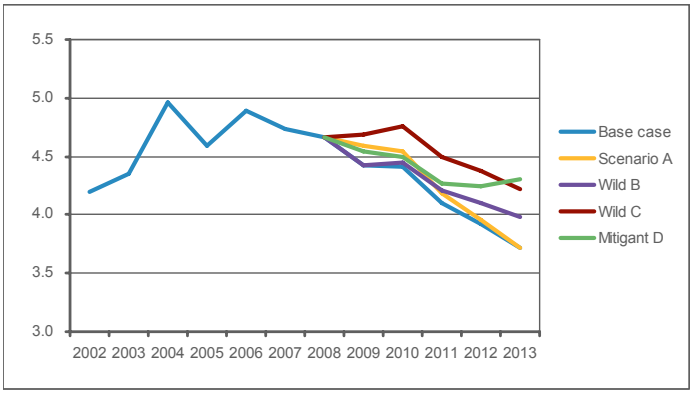
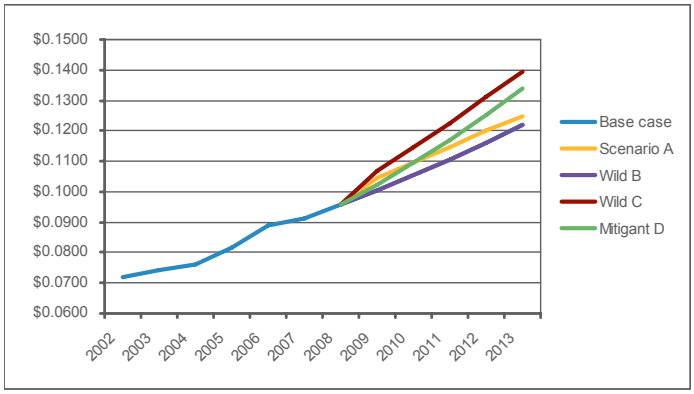


Chart F: (cents per kWh)



U.S. Investor-Owned Electric Utilities

Appendix B: Moody's estimated 2009 pension funding

In U.S. dollars (thousands) unless otherwise indicated. Public rated entities only

Summary projections	
Total underfunding ($), year ended 2008	**(40,542,207)**
Total underfunding (%), year ended 2008	**69**
Total 2009 contributions ($)	**6,825,456**

Assumptions	Equites	Fixed income	Other	Discount Rate
Asset Allocation	60%	30%	10%	N/A
Year to date losses	40%	10%	20%	N/A
Discount rate increase/(decrease)	N/A	N/A	N/A	-0.50%

	2007 Reported	2008 Projected			2009 Projected
Issuer name	Percentage Funded	Obligation	Over/(Under) Funding	Percentage Funded	Contributions
FPL Group, Inc.	217%	1,734,600	805,070	146%	—
Dominion Resources Inc.	138%	3,877,650	(258,070)	93%	—
Southern Company (The)	135%	5,943,000	(526,410)	91%	—
SCANA Corporation	132%	740,040	(80,095)	89%	—
Energy East Corporation	129%	2,360,198	(296,975)	87%	—
Xcel Energy Inc.	120%	2,795,897	(533,643)	81%	—
FirstEnergy Corp.	111%	4,987,500	(1,235,150)	75%	176,450
American Electric Power Company, Inc.	110%	4,314,450	(1,116,610)	74%	159,516
Northeast Utilities	109%	2,369,745	(623,571)	74%	89,082
CenterPoint Energy, Inc.	109%	1,727,250	(454,930)	74%	64,990
Edison International	107%	3,522,750	(968,880)	72%	138,411
PG&E Corporation	105%	9,535,050	(2,761,650)	71%	394,521
NiSource Inc.	104%	2,266,740	(677,618)	70%	96,803
DTE Energy Company	103%	3,202,500	(979,490)	69%	139,927
Duquesne Light Holdings, Inc.	102%	864,885	(266,497)	69%	38,071
PPL Corporation	102%	5,758,200	(1,782,200)	69%	254,600
Integrys Energy Group, Inc.	101%	1,270,710	(404,865)	68%	57,838
Duke Energy Corporation	100%	4,516,050	(1,448,140)	68%	206,877
NSTAR	99%	1,110,276	(365,218)	67%	52,174
OGE Energy Corp.	99%	548,100	(183,018)	67%	26,145
Consolidated Edison, Inc.	97%	9,130,800	(3,166,800)	65%	452,400
Pepco Holdings, Inc.	96%	1,785,840	(627,546)	65%	121,027
Sierra Pacific Resources	95%	708,421	(254,024)	64%	48,990
Public Service Enterprise Group Incorporated	94%	3,781,050	(1,374,150)	64%	265,015
Progress Energy, Inc.	93%	2,249,100	(831,940)	63%	160,446
Tennessee Valley Authority	93%	9,027,900	(3,364,230)	63%	648,816
Exelon Corporation	92%	10,948,350	(4,108,210)	62%	792,298
Hawaiian Electric Industries, Inc.	91%	1,048,541	(404,361)	61%	77,984
Sempra Energy	91%	2,930,550	(1,135,670)	61%	219,022
Energy Future Holdings Corp.	90%	2,451,750	(955,070)	61%	184,192
TECO Energy, Inc.	88%	585,060	(235,243)	60%	45,368
Ameren Corporation	88%	3,229,800	(1,314,220)	59%	253,457
Allegheny Energy, Inc.	87%	1,158,885	(474,303)	59%	91,473
Wisconsin Energy Corporation	87%	1,219,050	(503,938)	59%	97,188
AES Corporation, (The)	82%	5,114,550	(2,262,480)	56%	436,335
Entergy Corporation	82%	3,551,335	(1,588,481)	55%	306,350
Westar Energy, Inc.	78%	701,439	(329,981)	53%	63,639
Great Plains Energy Incorporated	78%	538,545	(254,474)	53%	49,077
Pinnacle West Capital Corporation	77%	1,806,886	(870,440)	52%	167,870
Constellation Energy Group, Inc.	77%	1,726,410	(832,875)	52%	160,626
American Water Works Company, Inc.	68%	962,844	(518,191)	46%	99,937
CMS Energy Corporation	65%	1,743,000	(977,620)	44%	188,541
Total	**102%**	**129,845,697**	(40,542,207)	**69%**	**6,825,456**

U.S. Investor-Owned Electric Utilities

Appendix C: Could the outlook change to negative?

Although we do not foresee a change in outlook for the investor-owned electric utility sector at this time, several possibilities—however remote—pose considerable risks for companies that are not adequately prepared.

- **Legislative or regulatory intervention.** Policy moves that are designed to revise, amend, adjust or completely restructure the existing electric utility market framework can often have a materially negative impact for the sector, especially in those cases if implemented unexpectedly quickly. The scale, scope and depth of an intervention—as well as any unintended consequences—would determine the magnitude of the rating reaction.

  Intervention is most likely to occur on an isolated basis—that is, within a particular U.S. state—and would not have significant implications for the sector as a whole. Federal legislation, however, could affect the entire sector.

- **Mismanaged liquidity.** Maintaining adequate sources of liquidity availability is critical. The sector's working capital requirements are often exposed to enormous swings, which, if not properly managed, could destroy a company's credit ratings. We believe utilities will approach their liquidity needs in a reasonably conservative manner, in part due to regulatory commitments to maintain reliability.

  Even so, mismanaging liquidity would pressure the sector's outlook severely. And although we would only expect to see mismanaged liquidity on an isolated basis, posing no significant impact to the sector, investor-owned electric utilities tend to be managed in similar ways. Therefore, a sudden federal intervention could conceivably expose a widespread lack of adequate liquidity.

- **Financing capital expenditures.** OpCo[9] is set to invest about $4.2 billion over the next five years. In September 2008 the company held $6.3 billion of net property, plants and equipment, and $8.7 billion in total assets. This level of investment will need to be financed, since the sector does not produce enough cash flow to cover its investment needs (let alone its dividends).

  We believe utilities will begin to finance their needs with a more balanced mix of debt and equity than we have seen to date. An over-reliance on debt as the primary financing source may stretch the sector's financial metrics and pressure its outlook. Unlike the risks noted above, financing decisions are longer-term risks. We believe most utilities now have time to revise their financing plans before this risk translates into sector-wide downgrades.

[9] This hypothetical company is derived from composite industry results (see page 3).

U.S. Investor-Owned Electric Utilities

Moody's Related Research

Industry Outlooks

- EMEA Electric and Gas Utilities, November 2008 (112344)
- US Coal Industry Outlook – 2009, October 2008 (112070)
- North American Natural Gas Transmission & Distribution, September 2008 (111486)
- U.S. Investor-Owned Electric Utilities: Six Month Update, July 2008 (109675)
- North American Natural Gas Transmission & Distribution: Six-Month Industry Update, March 2008 (108212)
- U.S. Electric Utility Sector, January 2008 (107004)
- US Coal Industry Outlook – 2008, October 2007 (105372)
- North American Natural Gas Transmission & Distribution, September 2007 (104854)
- U.S. Electric Utilities, December 2006 (101304)

Special Comments

- Carbon Dioxide: Regulating Emissions Following a Long and Winding Road, November 2008 (112822)
- U.S. Investor Owned Electric Utilities Somewhat Insulated (but not immune) from market stress, September 2008 (111891)
- New Nuclear Generating Capacity: Potential Credit Implications for U.S. Investor Owned Utilities, May 2008 (109152)
- EU Climate Change Strategy, May 2008 (108846)
- Decommissioning and Waste Costs for New Generation of Nuclear Power Structures, May 2008 (109086)
- New Generating Capacity in a Carbon Constrained World, March 2008 (107453)
- Credit Challenges Ahead For Public Power: Difficult Decisions on New Generation Capacity, November 2007 (105997)
- New Nuclear Generation in the United States: Keeping Options Open vs. Addressing An Inevitable Necessity, October 2007 (104977)
- Storm Clouds Gathering on the Horizon for the North American Electric Utility Sector, August 2007 (103941)
- Environmental Regulations Increase Capital Costs for Public Power Electric Utilities, June 2007 (103616)
- Regulation Of Greenhouse Gases: Substantial Credit Challenges Likely Ahead For U.S. Public Power Electric Utilities, June 2007 (103356)
- Regulatory Pressures Increase For U.S. Electric Utilities, March 2007 (102322)
- Moody's Comments on the Back to Basics Strategy for the North American Electric Utility Sector, November 2006 (100660)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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U.S. Investor-Owned Electric Utilities

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Moody's Investors Service

Special Comment

October 2008

U.S. Investor-Owned Electric Utilities

Somewhat Insulated But Not Immune from Credit Market Stress, Economic Weakness

- Fundamental industry outlook for U.S. electric utilities remains stable
- Liquidity appears adequate over near-term, but for most utilities only with continued unfettered access to capital markets
- Perception of increased investor interest across the entire capital structure – possibly indicating a defensive flight to quality – viewed positively given utilities' long-term financing requirements
- Proactive actions to bolster liquidity availability and strengthen balance sheet viewed as prudent given current economic and financial market conditions
- Reluctance or resistance by some utility Boards of Directors to issue common equity, given current economic and financial market conditions, viewed negatively – especially if utility encounters some form of distress over near- to intermediate-term horizon
- Continued support from regulators provides reasonable recovery of prudently incurred costs and investments with a reasonable return in a timely manner
- Financial profile continues to exhibit stability, but some modest deterioration seen in selected credit metrics

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Moody's Investors Service

U.S. Investor Owned Electric Utilities

Overview

With credit markets in flux and the U.S. economic downturn gaining momentum, the nation's investor-owned electric utility sector is in an enviable position compared with many other industries. The business model associated with the sector is relatively recession resistant, since the primary fuel for every functioning economy is electricity. As a result, the sector tends to enjoy widespread support from its legislative and regulatory authorities, who, in our opinion, prefer to regulate financially healthy companies. This support is evidenced by the relatively stable financial profile that the sector has produced over the past several years.

Nevertheless, the sector is not immune to the current tumultuous environment in the broad, macro markets, nor is it completely immune from the effects of a protracted recessionary environment. For example, the sector is an enormous consumer of natural resource commodities (including uranium, coal and natural gas), which have been exhibiting a significant amount of pricing volatility. Roughly half the sector's volumes represent commercial and industrial sales, which could be negatively impacted by a protracted recession, and there are risks associated with increasing bad debt expenses.

In the current environment, our primary concern relates to consumers who may reach a tolerance point to absorb annual rate increases. If this tolerance point is reached, consumers may seek some form of a bailout from their elected officials and regulators, thereby creating incremental pressure to limit rate relief and / or defer costs or investments. We incorporate a view that the sector is attempting to request financial relief more frequently, with lower average annual rate increases, in an effort to limit the potential risk of future rate shock.

A large portion of rate increases relate to costs that are currently being "tracked," or passed through directly to consumers. As a result, a significant portion of the annual rate increases are beyond management's control (i.e., fuel commodities) and could be subjected to longer-term recoveries by regulators. These pass-through expenses (which typically do not include an authorized margin component) could increasingly be viewed by regulators as materially lowering the overall business and operating risk profile of a utility, thereby resulting in lower authorized equity returns.

Furthermore, we note that many utility business plans incorporate a view that material capital expenditures are necessary over the next few years to support, refurbish and/or fortify the existing (aged) infrastructure; that environmental costs, which are a component of the infrastructure, are also increasing due to increasingly stringent mandates; and that costs associated with an aging workforce are growing at an increasing rate. A protracted recessionary environment may mitigate, but will not eliminate, these challenges.

Until recently, the sector was sharing some concerns over its ability to attract enough capital into their businesses to finance these infrastructure investment needs. A recession-induced slowdown could provide improved reserve margins over the near term, and offer the sector a chance to "catch up" with infrastructure improvements. Given current economic and financial market conditions, an investor "flight to quality" for the sector could be perfect timing for many utilities.

Liquidity adequate near term, assuming ongoing market access

Near-term liquidity is by far the most important factor for near-term ratings stability (for purposes of discussing a company's liquidity, near-term is defined as approximately 12 months). The utility sector appears to be adequately positioned with respect to its overall, near-term liquidity profile, but this incorporates an assumption that many utilities will continue to have unfettered access to the capital markets.

In general, the sector's liquidity can be characterized as having relatively low cash balances. However, utilities typically maintain a significant amount of availability under their bank credit facilities. The majority of these bank credit facilities were initially multi-year, fully syndicated facilities and they generally have a few more years before their scheduled expiration dates. The typical credit facility also has relatively modest financial restrictions (covenants) incorporated into the credit agreement and there usually is no material adverse change language regarding on-going drawings. This is a critical point to any liquidity evaluation or assessment.

U.S. Investor Owned Electric Utilities

In the table below, we show a summary of the cash sources and uses, on a consolidated basis, for a selected peer group of parent holding companies and large operating utilities in the sector. In general, cash sources include cash, availability under the credit facilities, gross cash flow and pending asset sales; while cash uses include capital expenditures, dividends and / or share repurchases, scheduled debt maturities and any other pending payments (such as tax payments or pension contributions). As evidenced in the table, there are a number of large, well-positioned, investment-grade companies whose business plans incorporate a view that access to capital will not be impeded.

Table 1

Estimated Sources and Uses as of June 2008 ($ billions)

Company	Senior Unsecured Rating	Short-Term Rating	Rating Outlook	Total Sources	Total Uses	Net Sources/ Uses
AEP	Baa2	P-2	Stable	$7.0	$5.8	$1.2
ConEd NY	A1	P-1	Negative	$3.4	$3.7	($0.3)
Consolidated Edison	A2	P-1	Negative	$5.6	$4.3	$1.3
Dominion Resources	Baa2	P-2	Stable	$6.6	$7.8	($1.1)
Duke Energy	Baa2	P-2	Stable	$7.4	$8.2	($0.8)
Duke Energy Carolinas	A3	P-2	Stable	$2.6	$3.7	($1.1)
Exelon Corp	Baa1	P-2	Stable	$12.6	$7.4	$5.2
Pepco	Baa3	P-3	Stable	$2.1	$1.9	$0.2
Progress Energy Carolinas	A3	P-2	Stable	$1.7	$2.0	($0.3)
PSEG	Baa2	P-2	Stable	$5.1	$5.4	($0.3)
Public Service E&G	Baa1	P-2	Stable	$1.5	$1.6	($0.1)
SCANA	Baa1	NR	Stable	$1.6	$1.7	($0.1)
Southern Company	A3	P-1	Stable	$2.6	$1.8	$0.8
Virginia Electric and Power	Baa1	P-2	Stable	$4.2	$3.9	$0.3

** Corporate Family Rating / Senior Unsecured*

Steps to bolster liquidity, balance sheets key amid market stress

In light of current economic and financial market conditions, any action to increase capital, increase credit capacity, eliminate refinancing risk and otherwise inoculate the business from capital market volatility should be viewed as a significant credit positive. From a liquidity perspective, Moody's does not view the recent announcements by some utilities that they are making material draw-downs on their bank credit facilities negatively, since it simply transfers the source of cash to cash from the availability under its credit facilities. Nevertheless, we would be concerned if the current conditions in the financial markets, which include a disruption to the commercial paper markets, were to remain in effect for a protracted period of time or if the ability to access the term markets were to be disrupted for an extended period of time. These risks argue for a relatively quick reduction to these drawn facilities before liquidity has a chance to become stressed over the intermediate term horizon.

As a result, we are increasingly focused on a utility's execution strategies associated with managing near-term liquidity and its overall approach to corporate finance policies. In general, we incorporate a view that utility management teams will act in a reasonably conservative manner when addressing their liquidity strategy. We view some recent actions on the part of several utility companies positively, which includes recent additions to bank credit capacity (Duke Energy, PPL), the pre-funding of near-term scheduled maturities (SCE&G), and the issuance of common equity (Xcel Energy, Otter Tail Power Corp).

U.S. Investor Owned Electric Utilities

Business volatility dictates liquidity capacity needs

From a liquidity perspective, Moody's tends to group the sector first by rating category (investment grade versus non-investment grade) and then by the inherent cash flow volatility incorporated into the business model. In the table below, we summarize a recent grouping of utility and power companies that could benefit from materially increasing their total available credit capacity:

Table 2

Group I: Investment Grade Utility / Power Companies Significant Merchant Energy / Trading / Non-regulated Activity			Group II: Non Investment Grade Utility / Power Companies Significant Merchant Energy / Trading Activity		
Company	Senior Unsecured Rating	Short-Term Rating	Company	Senior Unsecured Rating	Short-Term Rating
AEP	Baa2	P-2	Allegheny Energy Supply	Ba1	NP
AmerenEnergy Generating	Baa3	na	Calpine Corporation	**B2	SGL-3
Black Hills Corporation	Baa3	na	Dynegy Holdings	***B1 / B2	SGL-3
Constellation Energy	Baa2 / RUR Down	P-2	Edison Mission Energy	***Ba3 / B1	SGL-2
Dominion Resources Inc.	Baa2	P-2	Energy Future Holding Corp.	**B2	SGL-3
Edison International	Baa2	na	Mirant Corporation	**B1	SGL-1
Entergy Corp	Baa3	na	NRG Energy	***Ba3 / B1	SGL-1
Exelon Corporation	Baa1	P-2	PNM Resources, Inc.	Ba2	NP
Exelon Generation	A3	P-2	Reliant Energy	**Ba3 / RUR Down	SGL-1
FirstEnergy Corp.	Baa3	na			
FPL Group, Inc.	*A2	P-1			
Integrys Energy Group, Inc.	A3	P-2			
Otter Tail Corporation	A3	na			
PPL Corporation	*Baa2	na			
PPL Energy Supply, LLC	Baa2	P-2			
PSEG	Baa2	P-2			
PSEG Power	Baa1	na			
Sempra Energy	Baa1	na			
TransAlta Corporation	Baa2	na			

** Issuer Rating*

*** Corporate Family Rating*

**** Corporate Family Rating / Senior Unsecured*

In our opinion, most companies in the sector that maintain significant non-regulated business activities, which we tend to view as being higher risk, non-core (to the regulated utility operations) and more volatile (to cash flows), will need to maintain robust amounts of liquidity capacity. This liquidity capacity needs to be sized at a level that is sufficient to withstand the relatively high amounts of volatility associated with the commodities that are being hedged as well as the cash flow and earnings volatility that may exist with their non-regulated businesses. Often, the volatility associated with natural gas and power commodities have surprised utility companies, as well as non-regulated merchant generators.

In addition, we view the steady exit of large financial institutions as counterparties in the commodity trading and marketing sector as a fundamental credit negative for those companies that engage in these hedging

activities. In our opinion, the exit of counterparties could result in a decrease in market liquidity, a decline in the length of contract liquidity and wider bid-ask spreads.

Investor 'flight to quality' facilitates capital market access

Although credit is tightening substantially even for investment-grade companies, U.S. utilities continue to maintain reasonably good access to the markets. Borrowing costs are increasing, but utilities have been able to boost their liquidity capacity with additional revolvers or other credit facilities from banks. They continue to tap the capital markets for term debt, both on a secured and unsecured basis.

We believe the sector will maintain access to the markets. Investors perceive utilities as a safe haven, presenting the industry with ready access to debt and equity capital to finance capital expenditures and dividends. This "flight to quality" should particularly benefit utilities that have reduced the overall operating risk of their business activities during the last few years.

Market access is coming at a higher cost. But interest rates remain modest by historical standards and utilities generally have rate mechanisms that allow them to recover higher borrowing costs from customers. Still, the credit crunch has contracted the availability of commercial paper for some issuers and has substantially widened spreads over Treasuries for intermediate and long-term maturities. Since August, the sector has issued almost $7 billion in debt securities. We observe that a majority of these new offerings are from single-A rated utilities and primarily include senior secured debt.

Table 3

Recent Debt Offerings

Issue Date	Issuer	Type	Rating	Size ($mm)	Coupon	Yield	Term	Spread
10/7/08	Southern California Edison	FMBs	A2	$500	5.750%	5.862%	5 yr	340
10/7/08	Detroit Edison	G&R Mtg	A3	$250	6.400%	6.462%	5 yr	400
10/1/08	Interstate P&L	Sr. Unsec.	A3	$250	7.250%	7.375%	10 yr	358
10/1/08	Wisconsin P&L	Sr. Unsec.	A2	$250	7.600%	7.750%	30 yr	350
9/25/08	PECO Energy	FMBs	A2	$300	5.600%	5.664%	5 yr	263
9/25/08	South Carolina E&G	FMBs	A2	$250	6.500%	6.538%	10 yr	265
9/25/08	Wisconsin Electric	Notes	A1	$300	6.000%	6.041%	5 yr	300
9/4/08	Oklahoma G&E	Sr. Unsec.	A2	$250	6.350%	6.399%	10 yr	275
9/4/08	Ohio Power	Sr. Unsec.	A3	$250	5.750%	5.769%	5 yr	290
9/3/08	Northern States Power	FMBs	A2	$200	6.375%	6.433%	30 yr	210
9/3/08	Oncor Electric	Fallaways	Baa3	$300	7.500%	7.526%	30 yr	320
9/3/08	Oncor Electric	Fallaways	Baa3	$550	6.800%	6.815%	10 yr	313
9/3/08	Oncor Electric	Fallaways	Baa3	$650	5.950%	5.982%	5 yr	305
8/27/08	Sierra Pacific Power	G&R Mtg	Baa3	$250	5.450%	4.494%	5 yr	247
8/21/08	Duke Energy Indiana	FMBs	A3	$500	6.350%	6.365%	30 yr	193
8/13/08	Southern Company	Sr. Unsec.	A3	$600	L+70	L+70	2 yr	N/A
8/11/08	Entergy Louisiana	FMBs	Baa1	$300	6.500%	6.509%	10 yr	248
8/11/08	Southern California Edison	FMBs	A2	$400	5.500%	5.575%	10 yr	155
8/6/08	Public Service Co of Colorado	FMBs	A3	$300	5.800%	5.820%	10 yr	175
8/6/08	Public Service Co of Colorado	FMBs	A3	$300	6.500%	6.531%	30 yr	185
	TOTAL			**$6,950**				

Source: Barclays Capital

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Recession effect on infrastructure investment plans unclear

If the current economic and financial market conditions were followed by an extended recessionary period, the sector could experience some pressure. A recession could contribute to lower annual average volume growth percentages, or perhaps even volume declines. Depending on the environment, consumers may quickly reach a tolerance level where they more vigorously object to annual rate increases – and articulate those concerns through the political and regulatory processes.

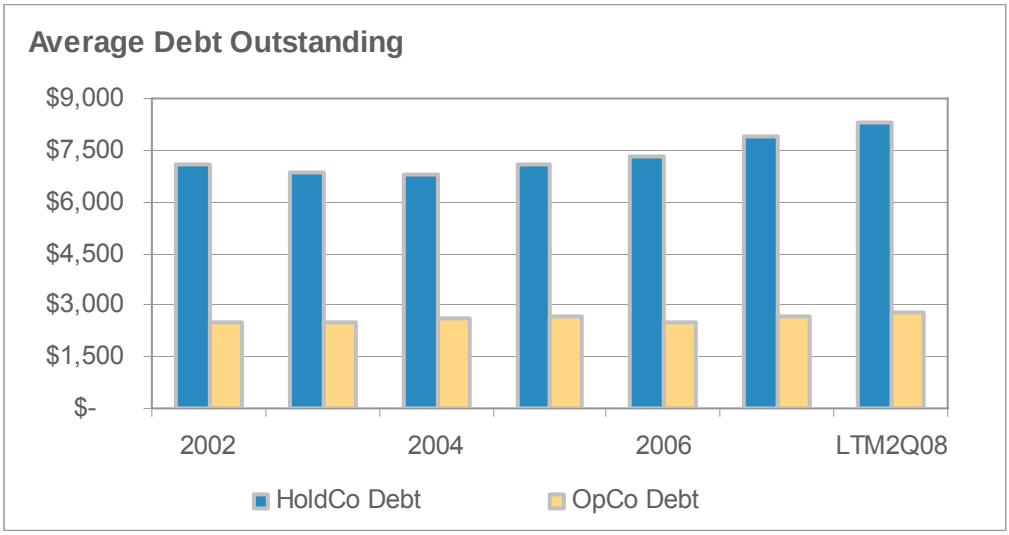
In addition, many regulators may incorporate a view that some of the supportiveness offered to utilities – in the form of expense trackers and/or riders – argues for a lower authorized return on equity, a trend that appears to be continuing.

More importantly, many utilities are playing "catch up" with respect to their investment in their infrastructure. As such, a recession-induced decline in volumes could be viewed as a long-term credit positive – since it provides a utility with additional time to strengthen and refurbish its network without the pressure of tight reserve margins. On the other hand, these investments should result in incremental rate increases, which could exacerbate pressures on regulators to limit near-term relief. Although longer-term relief may not be completely out of the question, many utilities are reluctant to incur the risk of sizeable deferrals on their financial statements.

Reluctance to issue common equity viewed negatively

Excluding the potential implications of recession for the sector, fundamentally we believe the sector should be increasing its equity financing targets, as evidenced by its substantial negative free cash flow generation – both historically and prospectively – and given an over-reliance on incremental debt financing.

Chart A:



Source: Moody's and company reports. Figures in U.S. $ millions.

Considering the current economic and financial market conditions, it is our opinion that the landscape may present a clear opportunity for utilities to access the equity markets on reasonable terms. The sector has significantly outperformed the broader stock market over the past few years, it continues to enjoy reasonable valuation multiples when compared to other industrial sectors and our perception that investors may be increasingly seeking defensive investment opportunities leads us to conclude that access to equity capital is ready and available.

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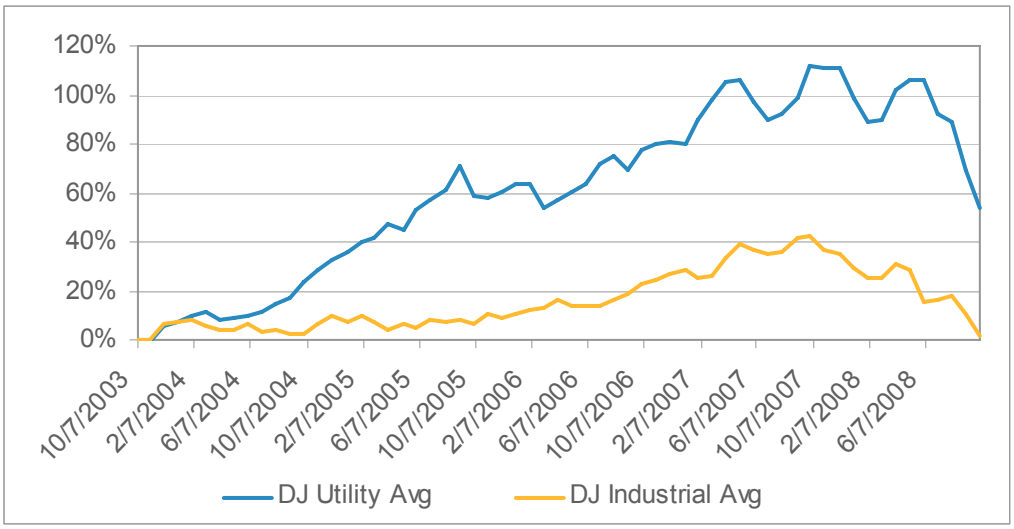
Chart B:

Relative Stock Performance over past 5 years



Source: Yahoo Finance

However, some companies continue to exhibit a reluctance or resistance to issuing common equity, which we view negatively. In the event that some utilities defer their equity plans, and subsequently experience some business or financial distress, Moody's would likely incorporate only a modest amount of tolerance before potential rating actions followed.

Utilities retain good regulatory support

The support provided to the U.S. electric utility sector by state regulators is the primary foundation for long-term credit stability. In general, Moody's incorporates a view that regulators will provide reasonable recovery for prudently incurred costs and investments with a reasonable return of capital (and on capital) in a timely manner. In addition, we incorporate a view that utility companies often behave as constructive corporate citizens within their authorized service territories, and that they have impressive constituency outreach programs. This contributes to our view that utilities also enjoy strong support from their elected officials in the legislative sector.

As depicted in the charts below, the support provided by regulators is evidenced in the sector's relatively stable revenues, earnings and cash flows. We observe that there has been reasonably steady growth in the revenues for both vertically integrated utilities and their parent holding companies, while cash flows have remained relatively steady. The divergence between the revenues and cash flow could be attributed, in part, to the level of fuel and purchased power and other "trackers" that utilities are utilizing to recover their costs, which generally do not have a margin component.

It should be noted that the charts below depict the average revenues and cash flows for a broad base of comparable companies, which are listed in Appendix A.

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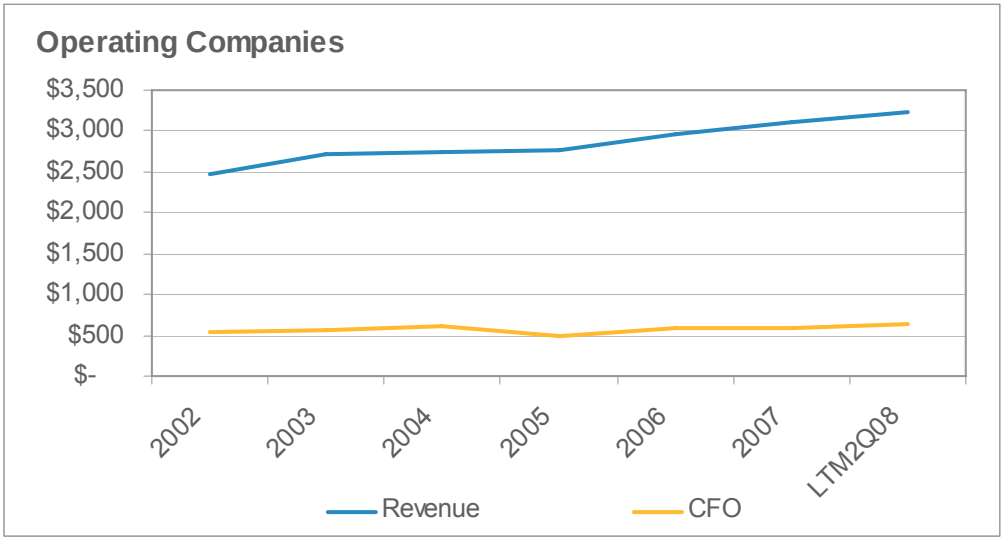
Chart C:

Operating company average historical revenues and cash flow from operations

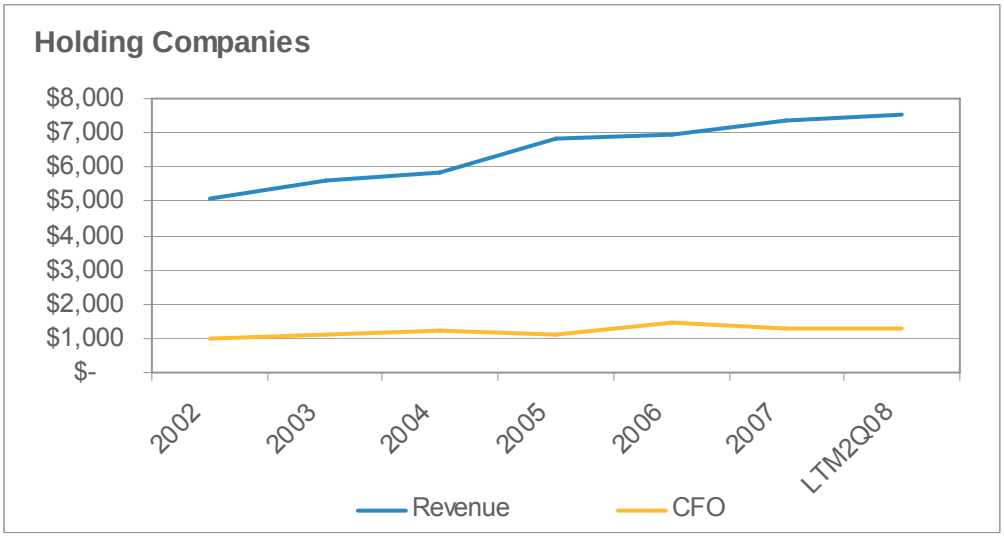


Source: Moody's.

Average includes 56 vertically integrated electric utilities. For a list of the utilities included in the average, please refer to Appendix A. Figures in U.S. $ millions.

Chart D:

Holding company average historical revenues and cash flow from operations



Source: Moody's.

Average includes 43 utility parent holding companies. For a list of the utilities included in the average, please refer to Appendix A. Figures in U.S. $ millions.

We believe regulation is, by definition, political. As a result, there are occasions when the relationship between a utility and its regulators (or legislators) becomes strained. In some instances, this strain can lead to financial distress. Over the past few years, we have observed the interaction in Maryland and Illinois (which was primarily legislatively sponsored) with concern. More recently, we have been monitoring the developments in Ohio, Arizona, Pennsylvania and New Mexico. Prospectively, we remain cautious regarding the potential developments in Texas and the New England and Mid-Atlantic regions. States in these regions (excluding

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Vermont) have all experienced a substantial market restructuring in an attempt to introduce competition into the sector, which leads us to conclude that these states also have a higher risk of additional restructuring.

However, over the longer-term horizon, we observe that often, the strain in the relationship is usually replaced with a general level of support that underlies our rating assessments. California, for example, is now considered reasonably constructive in its approach to regulation and Ohio continues to work in a broad collaborative manner to address its infrastructure needs within the scope of its regulatory environment. More recently, it appears that Pennsylvania has taken steps to resolve its issues in a relatively constructive manner.

This view is not meant to understate the financial stress that can be created when the relationship between a utility and its regulators / legislators becomes strained. Often, a strained environment may take several years to fully work out. As a result, we continue to view those states and regions, such as the southeastern region in the U.S., more positively (from an overall credit supportiveness of the regulatory environment) than other states or regions that have experimented with significant market restructuring.

In summary, we incorporate a view that regulators and legislators are aware of the infrastructure investment needs for the sector, the desire to address increasingly stringent environmental mandates and the generally rising operating cost structure. We also incorporate a view that regulators and legislators would prefer to have financially strong utilities providing their service, in part to attract businesses to their local economies. In the table below, we show a sampling of the more recent regulatory decisions, all of which included double-digit rate increases and an authorized return on equity over 10%. A few examples of pending rate cases are given, as well.

Table 4: Selected examples of recent regulatory support

Recently Decided Electric Rate Cases

State	Company	Decision Date	Revenue Result	Allowed ROE
ID	Avista Corp.	9/30/2008	12.0% Increase	10.20%
IL	Commonwealth Edison	9/10/2008	15.1% Increase	10.30%
WV	Appalachian Power	6/27/2008	11.4% Increase	10.50%

Pending Rate Cases

		Requested		Previous Case		
State	Company	Revenue	ROE	Revenue Outcome	ROE	Date
NY	ConEd	11.3% Increase	10.00%	4.7% Increase	9.10%	3/25/2008
KS	Kansas G&E	14.9% Increase	10.95%	3.5% Decrease	10.00%	12/28/2005
KS	Westar Energy	15.0% Increase	10.95%	4.6% Increase	10.00%	12/28/2005
ND	No. States Power - MN	12.2% Increase	10.75%	3.1% Increase	11.00%	12/15/1992
WA	PacifiCorp	14.6% Increase	10.75%	6.3% Increase	10.20%	6/21/2007
AZ	Tucson Electric	23.0% Increase	10.75%	1.1% Increase	10.67%	3/29/1996
MO	Union Electric	11.7% Increase	10.90%	2.0% Increase	10.20%	5/22/2007

Source: Regulatory Research Associates

Financial profile stable, with modest downtrend in some metrics

Over the past few years, many of our key financial credit metrics have exhibited some reasonable stability, although we remain concerned over the longer-term implications for several modestly declining trends, most notably the ratios associated with cash flows and capital expenditures. Although these modest declines for the sector have our attention, we do not incorporate a view that the declines are sufficient enough to warrant a change to the sector's stable fundamental industry outlook at this time.

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As depicted in the charts below, we evaluated the average ratios of retained cash flow to capital expenditures and cash flow from operations before any changes in working capital to total adjusted debt. These ratios reflect the substantial increases in the sector's capital investment plans, the incremental debt that the sector has issued to primarily finance those investments and the relative stability of annual cash flows.

Chart E:

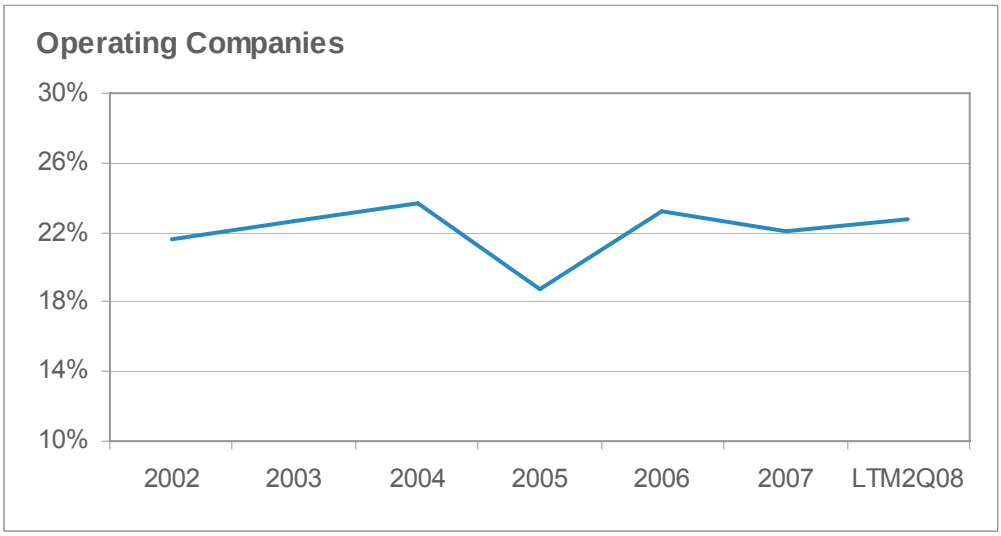
Average historical retained cash flow to capital expenditures

Source: Moody's.

Average includes 56 vertically integrated electric utilities. For a list of the utilities included in the average, please refer to Appendix A.

Chart F:

Average historical cash flow (adjusted for changes in working capital) to total adjusted debt



Source: Moody's.

Average includes 56 vertically integrated electric utilities. For a list of the utilities included in the average, please refer to Appendix A.

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Prospective financial profile remains investment grade

We incorporate a view that the sector should be reasonably well protected from the effects associated with a protracted recessionary environment and maintain its investment-grade ratings category. Unlike customers for many other capital-intensive industrial sectors, utility consumers may be less likely to sharply reduce their usage, beyond some modest level of conservation. They should still use an average amount of electricity. In contrast, a consumer can defer or decide against purchasing new equipment, automobiles or software.

In an effort to demonstrate the strong resiliency that utilities exhibit over a longer-term horizon, Moody's created a hypothetical, vertically integrated electric utility, which we will refer to as "RegCo." RegCo is an average of the 56 vertically integrated utility companies that are listed in Appendix A, and has produced, on average, roughly $3 billion in revenue and $575 million in cash flow from operations over the past few years. RegCo has approximately $6 billion of property, plant and equipment (net of accumulated depreciation), total assets of roughly $8.5 billion and approximately $2.8 billion of debt.

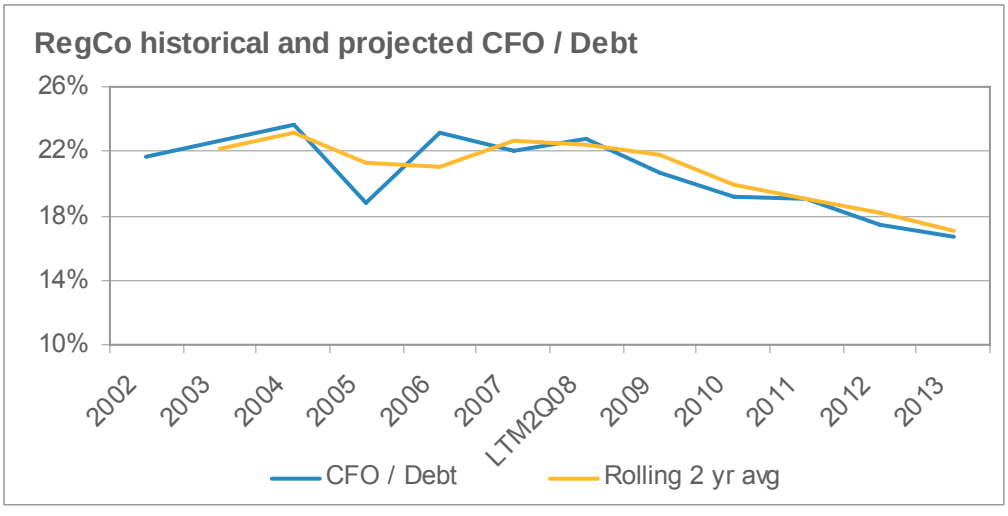
Moody's evaluated the average historical financial statements for RegCo between 2002 and the 12 months ended June 2008. Based on these historical financials, we made a series of assumptions, including assumptions regarding volume growth, rate increases, cost increases and dividend policy, in an attempt to generate a "base-case" view as to how RegCo might perform over the next five years (2009 – 2013). A list of our assumptions is included in Appendix B.

It should be noted that RegCo's base-case financial projections, which are premised on the historical averages for 56 vertically integrated electric utilities, do NOT completely represent our views regarding the likely performance for our individual, rated utility companies. Instead, this exercise should be viewed as an illustrative example of what might happen, based on our simple projections.

As depicted in the charts below, RegCo's base-case assumptions would produce a reasonable amount of CFO to adjusted total debt over our projected 5 year horizon. Although the trend line is modestly declining over the next few years, a credit negative, we observe that it remains comfortably above 15%, a threshold which remains firmly within our Baa investment-grade rating category.

Chart G:

Illustrative cash flow to debt, historical and base case projected



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Utility financials exhibit resilience to recessionary pressures

Although our concerns associated with a protracted recessionary environment are primarily associated with consumers reaching a tolerance point to absorb incremental rate increases, we remain confident that the sector has the fundamental ability to adjust its corporate finance policies in order to address any potential negative financial implications.

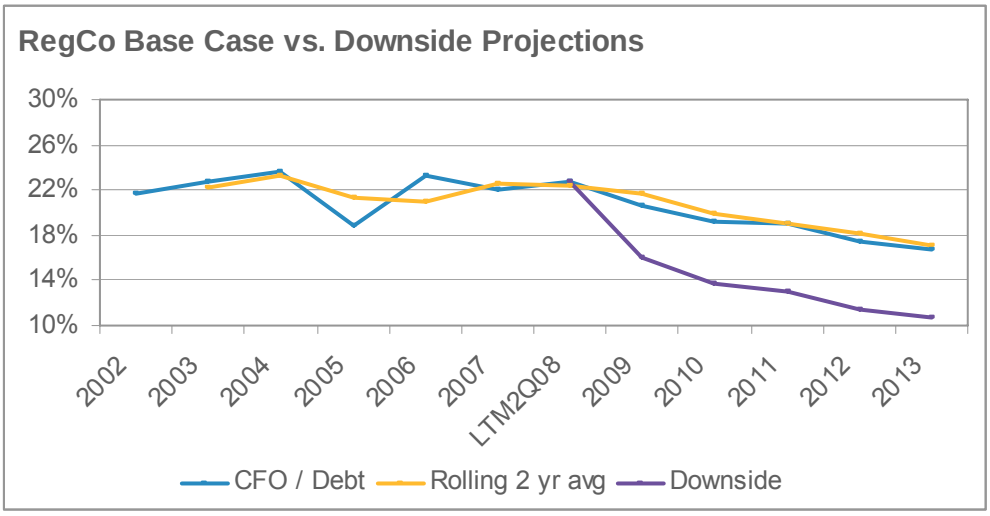
We observe that under many illustrative downside scenarios, RegCo should still be capable of producing positive cash flows from operations that represent over 10% of total adjusted debt outstanding. Although this ratio represents a material reduction from the longer-term average of roughly 23%, it remains unclear if that would be sufficient to push the sector into a non-investment-grade ratings category at this time. At a minimum, a ratio of 10% CFO to total adjusted debt would hardly be viewed as a crisis of solvency.

In the charts below, Moody's illustrates the sector's financial resiliency through projected CFO to total adjusted debt ratios that reflect several relatively severe downside assumptions, which are listed in Appendix B.

Should such downside scenarios materialize, there would be a significant amount of pressure on RegCo's ratings. However, we acknowledge that one of the primary benefits a utility enjoys is its long-term capital intensity and its reasonably stable production of cash flows. As such, RegCo should be in a position to address the negative impacts of a protracted recession by revising its corporate policies.

Chart H:

Illustrative cash flow to debt, historical, base case and downside scenarios



In Chart G below, we illustrate the positive benefits associated with RegCo revising some of its corporate finance policies. In this example, which we refer to as the downside case with mitigants, we assume RegCo reduces its planned capital expenditures by roughly 20% a year over the projection horizon and that RegCo lowers its annual dividend payout ratio to 45% (of prior year's earnings) from 65%. As evidenced in the chart below, there is some moderation of the decline in the ratio of CFO to total adjusted debt.

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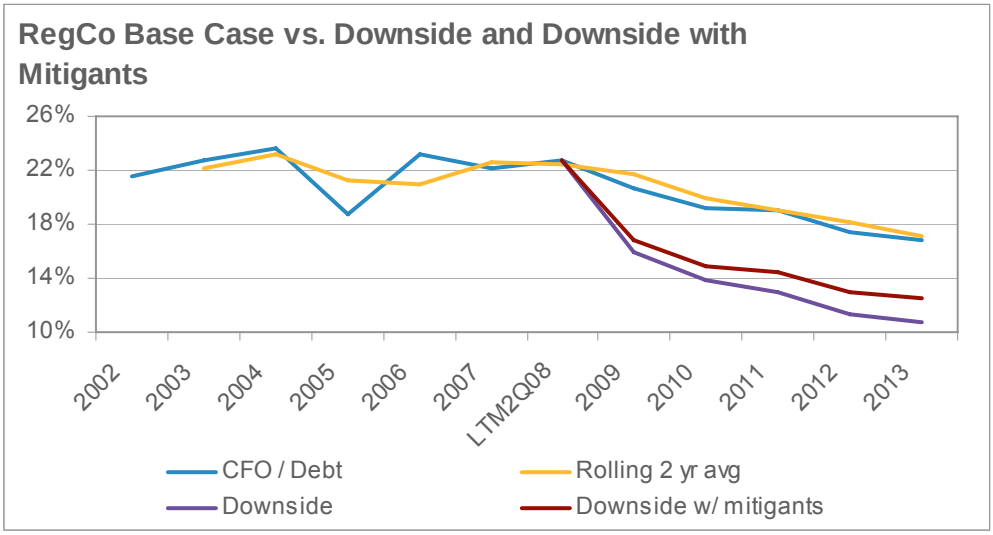
Chart 1:

Illustrative cash flow to debt, historical, basecase, downside and downside with mitigants



Conclusion

The fundamentals for the U.S. investor-owned electric utility sector remain intact. The support provided by the regulated business activities produce a relatively stable and predictable stream of revenues, earnings and cash flow, which, when compared to the total amount of outstanding debt, supports a strong investment-grade rating category. The sector appears to be well insulated from the potential for a protracted recession, but it is not immune to the potential negative consequences of continuing with business as usual.

Therefore, we believe some proactive steps may be necessary to fortify the sector's balance sheet over the longer-term horizon, in part due to the challenges associated with commodity fuel costs, massive infrastructure investment needs and increasingly stringent environmental mandates. The quickest and most effective means to accomplish a balance sheet strengthening program is a significant infusion of common equity, in our opinion.

Although the overall liquidity profile for the sector appears adequate, the historical reliance on commercial paper markets and debt financings lead us to believe that additional proactive steps to bolster liquidity are also in order.

It remains unclear, at this time, if a reduction or downward revision to the infrastructure investment needs of the sector is an appropriate long-term action. These infrastructure investments had been identified as necessary, given the age of the assets, and continued regulatory support has been incorporated into most utilities' long-range forecasts, including an expectation that returns on capital would be reasonable. Should this prove not to be the case, it could represent the first crack in our fundamental assumption regarding the sector's ratings and rating outlooks.

While a protracted recessionary environment could create some near- to intermediate-term pressures on the sector's financial profile, we believe most companies have numerous options at their disposal to address these pressures well in advance – actions which we assume a conservative utility management team and Board of Directors would pursue.

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Appendix A

Vertically Integrated Operating Companies	Senior Unsecured Rating
Alabama Power Company	A2
Appalachian Power Company	Baa2
Arizona Public Service Company	Baa2
Avista Corp.	Baa3
Cleco Power LLC	Baa1
Columbus Southern Power Company	A3
Consumers Energy Company	*Baa1
Dayton Power & Light Company	**A3
Detroit Edison Company (The)	**Baa1
Duke Energy Carolinas, LLC	A3
Duke Energy Indiana, Inc.	Baa1
Duke Energy Ohio, Inc.	Baa1
El Paso Electric Company	Baa2
Entergy Arkansas, Inc.	**Baa2
Entergy Gulf States Louisiana	*Baa3
Entergy Louisiana, LLC	Baa2
Entergy Mississippi, Inc.	**Baa3
Florida Power & Light Company	**A1
Georgia Power Company	A2
Gulf Power Company	A2
Hawaiian Electric Company, Inc.	**Baa1
Idaho Power Company	Baa1
Indiana Michigan Power Company	Baa2
Kansas City Power & Light Company	A3
Kentucky Power Company	Baa2
Madison Gas and Electric Company	Aa3
MidAmerican Energy Company	A2
Mississippi Power Company	A1
Nevada Power Company	**Ba3
Northern Indiana Public Service	Baa2
Northern States Power Company (MN)	A3
Northern States Power Company (WI)	*A2
Ohio Power Company	A3
Oklahoma Gas & Electric Company	A2
Pacific Gas & Electric Company	A3
PacifiCorp	Baa1
Portland General Electric Company	Baa2
Progress Energy Carolinas, Inc.	A3
Progress Energy Florida, Inc.	A3
Public Service Company of Colorado	Baa1
Public Service Company of New Mexico	Baa3
Public Service Company of Oklahoma	Baa1
Puget Sound Energy, Inc.	Baa3
San Diego Gas & Electric Company	**A2
Sierra Pacific Power Company	**Ba3
South Carolina Electric & Gas Co	A3
Southern California Edison Company	A3
Southwestern Electric Power Company	Baa1
Southwestern Public Service Company	Baa1
Tampa Electric Company	Baa2
Tucson Electric Power Company	**Baa3
Union Electric Company	**Baa2
Virginia Electric and Power Company	Baa1
Wisconsin Electric Power Company	A1
Wisconsin Power and Light Company	A2
Wisconsin Public Service Corporation	A1

Parent Utility Holding Companies	Senior Unsecured Rating
Allegheny Energy, Inc.	Ba1
ALLETE, Inc.	**Baa1
Alliant Energy Corporation	****P-2
Ameren Corporation	**Baa3
American Electric Power Company	Baa2
Black Hills Corporation	Baa3
Cleco Corporation	Baa3
CMS Energy Corporation	Ba1
Constellation Energy Group, Inc.	Baa2
Dominion Resources Inc.	Baa2
DPL Inc.	Baa2
DTE Energy Company	Baa2
Duke Energy Corporation	Baa2
Edison International	Baa2
Empire District Electric Company	Baa2
Energy Future Holdings Corp.	***B2
Entergy Corporation	Baa3
Exelon Corporation	Baa1
FirstEnergy Corp.	Baa3
FPL Group, Inc.	**A2
Great Plains Energy Incorporated	Baa2
Hawaiian Electric Industries	Baa2
IDACORP, Inc.	Baa2
IPALCO Enterprises, Inc.	*Ba1
MidAmerican Energy Holdings Co.	Baa1
OGE Energy Corp.	Baa1
Pepco Holdings, Inc.	Baa3
PG&E Corporation	Baa1
Pinnacle West Capital Corporation	Baa3
PNM Resources, Inc.	Ba2
PPL Corporation	**Baa2
Progress Energy, Inc.	Baa2
Public Service Enterprise Group	Baa2
Puget Energy, Inc.	**Ba1
SCANA Corporation	Baa1
Sempra Energy	Baa1
Sierra Pacific Resources	***Ba1
Southern Company (The)	A3
TECO Energy, Inc.	Baa3
UniSource Energy Corporation	*Ba1
Westar Energy, Inc.	Baa3
Wisconsin Energy Corporation	A3
Xcel Energy Inc.	Baa1

** Senior Secured or First Mortgage Bond Rating*

*** Issuer Rating*

**** Corporate Family Rating*

***** Short-Term Rating*

Appendix B

RegCo's base-case simplifying assumptions include the following:

- Cash flow from operations equal 18% of revenue in 2009, but modestly decline to 16% by 2013. Historically, this relationship of cash flows and revenue has exhibited a steady decline from roughly 21% in 2002 to 18% in 2005, where it remains today.
- Annual rate increases are provided at a level that results in a 10% return on equity every year.
- Dividends are paid based on 65% of the prior year's net income available to common shareholders. This results in a projected dividend payout ratio in the low-60% range, which we view as reasonable. The dividend payout ratio in 2007 was 56%.
- Negative free cash flow is financed 80% debt / 20% equity and a 7% interest rate is applied to all incremental debt throughout the forecast period. In the event positive free cash flow is generated, the model will reduce debt and equity in the same 80% / 20% percentages.
- There are no other debt maturities assumed.
- Volumes grow at 1% per year.
- Operations and maintenance expenses grow at 5% per year.
- Fuel and purchased power increases are assumed as follows:
  - 5% increase in 2009
  - 7.5% increase in 2010 and 2011
  - 5% increase in 2012
  - 2.5% increase in 2013

Base capital expenditures are assumed as follows:

- 225% of prior year's depreciation and amortization (D&A) in 2009
- 210% of prior year's D&A in 2010
- 200% of prior year's D&A in years 2011- 2013

As a simplifying assumption, Moody's incorporates a view that all capital expenditures are immediately placed in rate base and depreciated. This assumption avoids the creation of construction work in progress accounts (CWIP) or other deferral accounts that can complicate our projection model. Essentially, this assumes that regulators will be providing real time recovery on all expenditures on an annual basis.

Downside assumption adjustments to the base case:

- 0% annual volume growth instead of 1% in the base case
- The ratio of CFO to revenues is reduced by 300 basis points across the projection horizon.
- Annual rate increases limited to 3% per year across the projection horizon.
- The annual fuel and purchased power expense increases are cut by 50% across the projection horizon.
- Average interest expense increases by 200 basis points (to 9% from 7%) for any incremental debt issued over the next five years

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Moody's Related Research

Covenant Quality Assessments

- Oncor Electric Delivery, August 2008 (111034)
- Public Service Company of New Mexico, May 2008 (109223)
- PNM Resources, May 2008 (108991)
- AmerenEnergy Generating Company, April 2008 (108549)
- Dominion Resources, February 2008 (107829)
- Virginia Electric and Power Company, February 2008 (107828)

Rating Methodologies

- North American Diversified Natural Gas Transmission and Distribution Companies, March 2007 (102513)
- North American Natural Gas Pipelines, December 2006 (101229)
- North American Regulated Gas Distribution Industry (Local Distribution Companies), October 2006 (99282)
- Probability of Default Ratings and Loss Given Default Assessments for Non-Financial Speculative-Grade Corporate Obligors in the United States and Canada, August 2006 (98771)
- Rating Methodology: Global Regulated Electric Utilities, March 2005 (91730)

Industry Outlooks

- US Investor Owned Electric Utilities – Six Month Industry Update, July 2008 (109675)
- US Electric Utility Sector, January 2008 (107004)
- North American Natural Gas Transmission & Distribution: Six-Month Industry Update, July 2008 (111486)
- US Coal Industry Outlook – 2008, October 2007 (105372)
- North American Natural Gas Transmission & Distribution, September 2007 (104854)
- U.S. Electric Utilities, December 2006 (101304)

Special Comments

- North American Midstream Energy Companies: Industry Snapshot and Issuer Profiles, September 2008 (111650)
- Natural Gas Pipelines Manage Risks Amid Building Boom, September 2008 (111220)
- Gas Distribution Companies See Late Payments Rise, But Liquidity Holds Up, August 2008 (110376)
- New Nuclear Generation Capacity: Potential Credit Implications for US Investor Owned Utilities, May 2008 (109152)
- EU Climate Change Strategy, May 2008 (108846)
- Decommissioning and Waste Costs for New Generation of Nuclear Power Structures, May 2008 (109086)
- New Generating Capacity in a Carbon Constrained Environment, March 2008 (107453)
- Credit Challenges Ahead For Public Power: Difficult Decisions on New Generation Capacity, November 2007 (105997)

(continued on next page)

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Special Comments *(continued)*

- New Nuclear Generation in the US: Keeping Options Open Vs Addressing An Inevitable Necessity, October 2007 (104977)
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- Uncertainties Remain With Respect To The Restructuring of the Texas Electric Utility Industry, March 2004 (81796)

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U.S. Investor-Owned Electric Utilities

Report Number: 111891

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